DOCUMENT RESUME

ED 168 238 EC 113 810

TITLE Evaluation of the Process of Mainstreaming Handicapped Children Into Project Head Start. Phase II Interim Report.
INSTITUTION Applied Management Sciences, Inc., Silver Spring, Md.
SPONS AGENCY Administration for Children, Youth, and Families (DHEW), Washington, D.C.
PUB DATE 24 Mar 78
CONTRACT 103-76-1113
NOTE 290p.; Print is marginal and may not reproduce well; For related documents, see EC 113 808-811

EDRS PRICE MF01/PC12 Plus Postage.
DESCRIPTORS *Handicapped Children; *Mainstreaming; Methods; Parent Attitudes; Preschool Education; *Preschool Programs; Teacher Attitudes
IDENTIFIERS *Project Head Start

ABSTRACT

The document presents the interim report for Phase II of a study to determine how services provided by Project Head Start programs impact handicapped preschool children. The report summarizes the baseline data obtained and identifies the key methodological issues for consideration in the final data analysis effort. The instrumentation and methodology are reviewed, a preliminary analysis of baseline findings is presented, pretreatment conditions are documented, and certain methodological issues are clarified for the analysis plan. In addition to comparing handicapped children's progress in Head Start and other programs with a small sample of unserved children, the study also focuses on involvement with Head Start as it affects parent and teacher attitudes. A description of the sample is presented, and instrumentation issues are discussed, including the Alpern-Boll Developmental Profile and measures of attitude towards mainstreaming of the handicapped. Group differences considered include personal characteristics of the child, attitudes and characteristics of the child's family, attitudes and characteristics of the teachers, characteristics of the programs, and classroom integration. Data collection procedures, instruments, frequency tables for demographic data, and the Duncan Socio Economic Index are appended. (DLS)

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EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO PROJECT HEAD START

PHASE II INTERIM REPORT

March 24, 1978

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Prepared for:

Administration for Children, Youth and Families
Office of Human Development
Department of Health, Education and Welfare

Contract No. HEW 105-76-1113

The conclusions presented in this report are those of the Contractor and do not necessarily reflect the views of the U.S. Department of Health, Education and Welfare or any other agency of government.

EC 113810

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Acknowledgements

The authors of this report would like to acknowledge the contribution made by the many people who were involved in the development and conduct of this study.

First and foremost, we would like to thank Mr. Raymond Collins, Chief of the Program Development and Innovation Branch of ACYF, and the members of his staff, particularly Dr. Jerry Lapides, Dr. Linda Randolph, and Dr. Pamela Coughlin for their very substantial input during the development of the data collection instruments. Similar recognition is owed to our Project Officer, Barbara Bates, and to Mr. Dennis Deloria from ACYF's Division of Research, Demonstration, and Evaluation.

Our Advisory Committee provided useful input concerning study issues to be addressed and the potential pitfalls of our preliminary data collection strategy. Members of this committee included Ms. Ann Sanford, Dr. Robert Clayton, Dr. Aaron Favors, Dr. Jean Hebeler, Dr. Thomas Finch and Dr. Winston Cochran.

Additionally, we would like to thank Dr. Jane Stallings and Ms. Kathy Pope of SRI International, Ms. Rusty Booth, and Dr. Elizabeth Prescott for their assistance and guidance in the training and use of the Prescott-SRI Child Observation System. It has been a pleasure for us to work with such committed professionals.

We would also like to thank the many employees of Applied Management Sciences who participated in or who otherwise contributed to this study. Especially noteworthy are our field staff interviewers, who demonstrated a high degree of commitment to the data collection activities. At every stage of this study, review and guidance were continually provided by Dr. Todd Tucker and Martin Bloom, President and Senior Vice-President, respectively, of Applied Management Sciences.

Finally, we would like to thank the directors and staff of the Head Start and non-Head Start Programs that participated in the study sample. This study required much of their time and energy, and we sincerely appreciate their cooperation in every phase of the data collection effort.

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INTRODUCTION

STUDY BACKGROUND

The Head Start, Economic Opportunity and Community Partnership Act of 1974 required that the Secretary of the Department of Health, Education, and Welfare shall report to the Congress of the United States at least annually on the status of handicapped children being served in Head Start, their handicapping conditions, and the nature of the services being provided. The legislation also authorized the Secretary to undertake special studies to meet these information needs.

On July 1, 1976, the Office of Child Development, now the Administration for Children, Youth and Families, DHEW, contracted with Applied Management Sciences, Inc. for a two phase research study to investigate the services provided to handicapped children enrolled in Project Head Start. Phase I of the study focused on the processes of recruitment, screening, diagnosis and the provision of services for handicapped children enrolled in Head Start. Non-Head Start preschool programs for the handicapped were also included in this study for comparative purposes.

To complement this information, the second phase of the study (now in progress) is designed to determine how services provided by

Head Start programs impact handicapped children. Again, Head Start as well as non-Head Start programs are being studied, and (for this phase of the study) a small group of non-served children.[1]

The data collected in this current research effort are to be used to assess efforts to serve the pre-school handicapped child and to formulate recommendations on ways to improve the effectiveness of Project Head Start through funding emphasis, technical assistance, and/or changes in performance guidelines. Information will also be disseminated to non-Head Start programs concerning Head Start practices that may be particularly effective with certain handicapping conditions.

PURPOSE OF THE INTERIM TECHNICAL REPORT

This report summarizes the baseline data obtained for this phase of the study during Fall 1977 and identifies the key methodological issues for consideration in the final data analysis effort. Specifically this report provides a review of the instrumentation and methodology, outlines preliminary analysis of baseline findings, documents pretreatment conditions, and clarifies certain methodological issues for the analysis plan.

The impact of services are to be assessed with respect to three major study questions:

- Is the progress of handicapped children enrolled in Head Start different from handicapped children receiving no special services?

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[1] Non-served handicapped children, for purposes of this study, are defined as handicapped children who are not enrolled in a program where at least two or more services (defined in terms of Head Start components, i.e., social services, education, parent involvement, health services, etc.) are available. The non-served sample, therefore, includes a few children who are receiving some limited services: 35 percent receive occasional services such as babysitting, parent training or counseling, and speech therapy (less than twice weekly); and 13 percent were previously enrolled in a program for services.

- Within Head Start programs, what variables explain differential progress among handicapped children?
- Do variables that account for developmental progress among children enrolled in Head Start differ from those that account for progress among children enrolled in non-Head Start programs?

In addition, there are several additional questions that will be addressed:

- To what extent does a handicapped child's involvement with Head Start affect his/her parents' attitudes and involvement with the child and his/her program of services?
- To what extent does the Head Start teacher's involvement with handicapped children affect his/her attitude toward mainstreaming and/or handicapped children?

Methodology

To answer these basic study questions a pretest-posttest evaluation design, shown in Figure 1.1, was developed using two referent comparison groups: non-Head Start programs and a group of non-served handicapped preschool children.

	PRE TEST	TREATMENT	POST TEST
Head Start programs	All measures [1]	Head Start	All specified post test measures
non-Head Start programs	All measures	Others	
non-served group	Selected child-specific measures	No Treatment	Selected child-specific measures

FIGURE 1.1: PRETEST/POSTTEST STUDY DESIGN

All specified pretest measures were administered to both the Head Start and non-Head Start cases. However, because they were not enrolled in any program, the non-served group, received only the child specific measures which could be completed by the parent. For posttest data collection, the non-served group will receive the same measures as used in baseline data collection. Both the Head Start and non-Head Start respondents will have the same posttest measures used, however, those pretest measures dealing with static, non-alterable variables, such as teacher-pupil ratio, program budget, etc., will not be repeated.

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[1] The specific measures are discussed in detail in Appendix II.

Of the three groups from which data are being collected, the groups do not appear to be equivalent on any of the specified outcome measures and on some of the demographic characteristics. Because a superficial inspection of each group indicates differences, the study design assumes non-equivalent groups. A major purpose of the Interim Report will be to specify areas of non-equivalence for the groups under consideration and to specify procedures for controlling or correcting these differences. Identifying these areas of non-equivalence and the subsequent correction procedures is important for comparing the groups on any specified variable.

The primary dependent variable used to assess treatment effects is the growth and development of the child. A child's progress is defined in terms of developmental progress and increased interaction with peers and adults. The Administration for Children, Youth and Families, DHEW has detailed five broad types of variables on which they believe child progress is dependent:

personal characteristics of the child

developmental status (including social competency)
- cognitive
- social-emotional
- motoric
- self-help
- language

primary handicap/severity level

previous program experience

chronological age

attitudes and characteristics of the child's family	family characteristics ● structure ● income ● occupation ● ethnicity parent support of child development parental attitudes about mainstreaming/ child's programs parent educational and familial values
attitudes and characteristics of the child's teacher	teacher characteristics ● experience ● education ● training ● salary attitudes about mainstreaming/ handicapped children teacher's perceptions of organizational support teacher's educational values (including perceptions of appropriate parent roles)
program characteristics	program size length of service to handicapped coordinator of handicapped services program structure mainstreaming options funding level use of community-resources classroom structure

classroom integration	degree of peer/child interaction degree of child/staff interaction degree of classroom integration

Answers to the study questions must be explored within the larger framework of relationships that serve to explain developmental changes over the course of a program year. It is expected that child progress can be explained in terms of the five groups of characteristics described above. This general framework of relationships is depicted in Figure 1.2 (page 1.6). This framework is based on the RFP specified variable construction and suggests that developmental progress is a function of several key variable categories. However, this framework also suggests that certain variable categories are contingent upon variable categories to their immediate left in this exhibit. For example, it is anticipated that developmental progress is dependent upon the degree of peer/adult classroom interaction to which a given child is exposed. However, the degree of peer/adult classroom interaction is in turn largely a function of the variable sets preceding it.[1]

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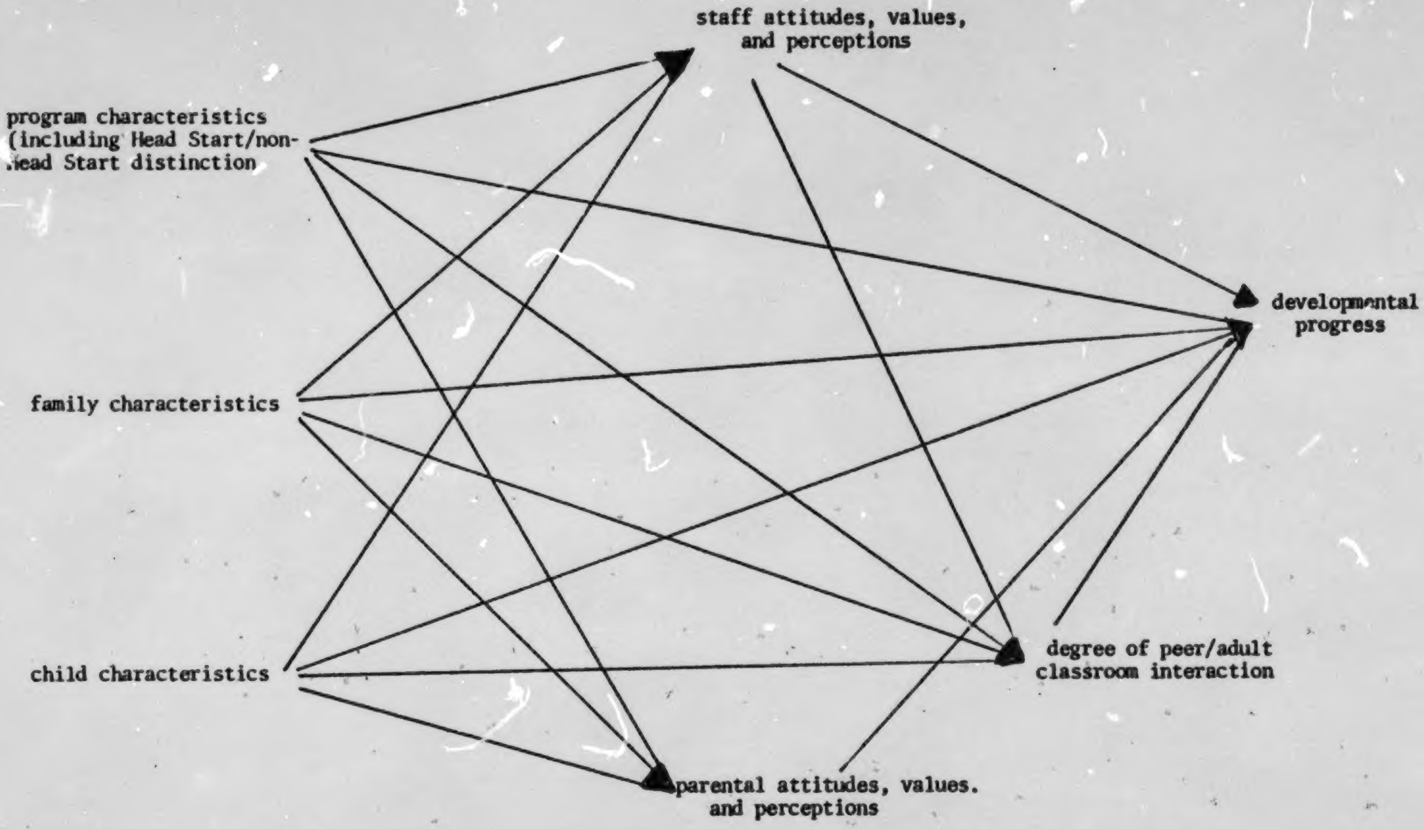
[1] The convention of path analysis in Exhibit 1 has been borrowed. It is not, however, intended for this exhibit to represent a complete conceptualization of the causal mechanism at work in a program's impact upon child development. This exhibit ignores non-recursive relationships which obviously would have to be considered in the issues under investigation (e.g., staff attitudes may be as much affected as they in turn affect the degree of classroom interaction). This model is also static, whereas Phase II analysis must deal with change in the three sets of intervening variables (staff attitudes, parent attitudes, and classroom interaction). However, for purposes of organizing the data needs for Phase II, this framework represents a useful point of reference.

FIGURE 1.2: STRUCTURAL FRAMEWORK FOR PHASE II ANALYSIS


staff attitudes, values, and perceptions
program characteristics (including Head Start/non-Head Start distinction
family characteristics
child characteristics
developmental progress
degree of peer/adult classroom interaction
parental attitudes, values. and perceptions

Instrumentation Issues

Certain attitude measures and alternative test forms require detailed review in this report. This review provides a descriptive picture of key variables and also determines measurement idiosyncrasies that require statistical considerations in the conduct of the final analysis. Two issues especially require attention.

The first issue is the use of information based on parent report instead of direct functional assessment of the individual child. Applied Management Sciences has determined that the required time for administration of the Alpern-Boll Developmental Profile, a parent report measure, is significantly less than similar direct measures of the individual child (one-half or less). Therefore, respondent burden could be decreased and substantial economy could be gained by using this instrument (rather than a direct functional assessment of the individual child) as the primary dependent variable. The Learning Accomplishment Profile - Diagnostic edition (LAP-D) was selected as an individual measure requiring just over one hour to administer and score. The LAP-D assesses essentially similar areas of social, cognitive, and physical development. Additionally, the LAP-D was designed specifically for developmental assessment in the preschool and early school range, and with excellent psychometric properties, thus providing a powerful tool for comparison with the Alpern-Boll. While the psychometric data available on the Alpern-Boll indicate that it is essentially equivalent to other individual child measures that are designed to assess similar areas, a major study objective was to statistically confirm equivalence for this particular study population. Therefore, a minimum of 100 Head Start children were identified to receive individual administration of both the Alpern-Boll and the LAP-D. Following data collection, an analysis of test equivalency was conducted.

The second instrumentation issue requiring special attention is the development of two measures of attitude towards mainstreaming handicapped children. Both attitude measures, one designed for parents and the other designed for teachers, were developed from item pools and other scales. They generally follow the "Likert" format.[1] The content validity of the scales and the extent to which they measure what they purport to measure must be determined by analysis of baseline data.

In addition to specific examination of these instrumentation issues, there is another broader issue for consideration. Because of the possibility for respondent attrition or posttest absence, certain contingencies were carefully included in the collection of baseline data. These include the collection of alternate form data for certain respondents and the baseline collection of one-time only information (occupation, education, income, etc.). For purposes of posttest planning, the psychometric characteristics of the "alternate form," tests must be examined to determine their utility. Any indications of the lack of validity of these alternate forms in the baseline data may indicate that they are not useful for posttest data requirements.

Identification of Group Differences

A clear understanding of baseline findings is necessary in order to identify similarities and differences in Head Start and non-Head Start programs. Only the specific documentation of baseline levels and potential rates of change will enable accurate comparisons between groups.

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[1] The "Likert" format for attitude scales is commonly designed as a positive or negative statement with which the respondent agrees (usually on a scale of strongly agree or agree) or disagrees (strongly disagree or disagree) or is neutral (undecided). The actual descriptors frequently vary as do the scales (some scales use only one choice for each category and others use 3 or 4 choices), but the general format of positive, or negative responses is standard.

Because of the complex nature of over 400 identified variables and because of the mixed nature of these variables (both discrete and continuous), those key variables which are most important in determining specific program effects, if any, must be identified.

The analysis of baseline findings presented in this report is primarily a descriptive approach. The intent is to describe how Head Start programs differ from available non-Head Start programs and to identify substantive differences in programming for various handicapping conditions. Identifying substantive pretest differences will prevent these differences from obscuring other changes and will help to accurately describe how programs make impact on children with handicaps. Because the study design uses two groups which are essentially non-equivalent, both with respect to themselves and with respect to the control group (non-served), it is necessary to identify as many of the variables as possible where similarities and differences do exist. This will enable statistical comparisons between programs where there are major similarities on these variables (such as in program or staff characteristics) for certain analysis efforts. Where substantial differences are shown to exist between programs, however, these differences must be verified and their effects statistically controlled for.

The complex path model used to describe the overall analysis approach requires that the massive quantity of variables be reduced to those significant groups of variables to which the greatest amount of assessed change can be attributed.

Overview of Sample

To answer the major study questions, data was collected on five groups:

- Program directors for each center in which children are sampled.

- Handicapped children enrolled in Project Head Start programs. Respondents included the child's parents and teachers, and observations of the child.
- Handicapped children enrolled in non-Head Start programs serving the preschool handicapped in the same communities as the selected Head Start programs. Again, respondents were the child's parents and teacher, and observations of the child.
- Handicapped preschool-age children who were currently not receiving any form of treatment related to their handicap. Respondents were limited to the parent.
- Non-handicapped preschool-age children. Observations of the child were obtained.

The sample included 400 Head Start handicapped children (429 were actually obtained), 400 handicapped children enrolled in non-Head Start programs (353 were obtained), and 200 diagnosed preschool handicapped children not receiving services (154 were found), and 200 "non-handicapped" children who would be observed with the Prescott-SRI Child Observation System in order to acquire a non-handicapped reference group (230 were identified and used).

A total of fifty-nine (59) Head Start programs (Grantees or Delegate Agencies) were selected for inclusion in the study (55 participated). Randomly selected, these programs are representative of the population of all Head Start programs with regard to SMSA/non-SMSA location and size of program enrollment. Fifty (50) non-Head Start programs which also serve preschool handicapped children in the same community agreed to participate. Three sources of information were utilized from Head Start as well as non-Head Start programs: existing program records, results of standardized tests and assessment procedures, and structured interviews conducted with children's parents and teachers. These measures collected data on respondent characteristics and attitudes toward handicapped children and the practice of mainstreaming, and on child growth and development.

Summary

The overall analysis plan cannot properly proceed without some descriptive information concerning the effects of various variable groups on these program features. This pretest-posttest design is based on what is expected to be non-equivalent groups for comparison of the effects of Head Start and non-Head Start programs as well as the relative absence of any program at all. A large number of prospective variables have been considered and some will have to be eliminated from the final data analysis effort. In addition, instruments require verification of their measurement capability.

The intent of this report is to verify the validity of certain test instruments, to describe program similarities and differences and to identify the key variables from each of the variable groups which should be retained for consideration in the general analysis plan.

2

DESCRIPTION OF SAMPLE

To answer the study questions, five specific audiences were selected for data collection:

- Program directors for each center in which children are sampled;
- 400 handicapped children enrolled in Project Head Start, their parents and their teachers;
- 400 handicapped children enrolled in non-Head Start programs serving the preschool handicapped (in the same communities as the selected Head Start programs), their parents and their teachers;
- 200 handicapped preschool-age children who are currently not receiving any form of treatment related to their handicap and their parents;
- 200 non-handicapped preschool-age children.[1]

PROGRAM SAMPLE

A total of fifty-nine (59) Head Start programs (Grantees or Delegate Agencies) were selected for inclusion in Phase I of the study and were asked to participate in this phase also. Randomly selected, these programs are representative of the population of all Head Start programs with regard to SMSA/non-SMSA location and size of program enrollment. Four of the original fifty-nine Head Start programs were dropped from the data collection effort. Three programs were dropped because their start and end dates for the program year did not allow a sufficient pre-post interim. A fourth program requested to be dropped because they were involved in several other data collection efforts as well as a major evaluation and had been unable to secure the necessary diagnoses for their children.

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[1] For purposes of the study a preschool aged child is defined as a child between the ages of two years, six months and six years-six months at the time of pretesting.

A total of 160 non-Head Start programs which also serve preschool handicapped children in the same community were contacted and asked to participate. Of the fifty-four (54) non-Head Start programs that responded and agreed to participate, four were dropped when the age limits of their handicapped children exceeded the study requirements.

PLANNED SAMPLE

A total of 815 children who were enrolled in either Head Start or a designated non-Head Start program were ultimately selected for participation in the study. Children were selected for participation from coded lists which indicated only a child code, program code and primary handicapping condition. The desired sample goal was for 400 children in each program with equal distribution of all handicapping conditions. To meet this goal at least 40 children of each handicapping condition had to be present in the sampled Head Start programs and 40 additional children in the sampled non-Head Start programs.

As the random selection of children from the coded lists proceeded, it became obvious that the goal of 40 children for each handicapping condition would not be met for some handicapping conditions. Only three blind and seven deaf children were available for sampling - all were selected for inclusion. Fewer than twenty-five visually impaired and thirty-five hearing impaired children were available. While the national incidence level for these few handicapping conditions is relatively small, the actual selection rate for the study significantly underrepresent the expected incidence of occurrence. Two possible phenomena may explan, in part, the low incidence: enrollment of these children in highly specialized (often segregated) "special" programs; and, the lack of comparable specialized services in most preschool programs.

Staffing, training, data collection procedures, and analysis strategies were all based on a planned for sample of 800 children from the two programs. The low frequency of these four handicapping conditions allowed for some other handicap categories to be sampled at a higher rate. This was most easily accomplished for the handicapping conditions of speech impaired, physically handicapped, and mentally retarded. Of the 815 children selected from the coded child lists for inclusion in the study, 782 have been retained for baseline analysis and will be reassessed during the posttest data collection. Thirty-three cases were dropped from the study because critical measures were missing or non-repeatable measures were considered invalid. The field teams determined that children from some of the selected non-Head Start programs exceeded the age limits for the study, and that parent permission had not been secured for all children. Completed data on all designated measures were obtained for the 782 cases that have been retained.

NON-SERVED SAMPLE

Children included in the non-served study group were selected from an identified (professionally diagnosed) population of preschool children not currently receiving treatment for their handicaps. Most of the children selected were chosen from the same communities in which the selected Head Start programs were located. Additionally, to avoid possible legal difficulties, the selected study group resided primarily in states which had not mandated the provision of services to all preschool handicapped children.

Potential study participants were identified through a number of sources. The directors of each Head Start and non-Head Start program was asked to provide names, addresses and telephone numbers of handicapped children who were awaiting enrollment in their programs. Other resources contacted for the same purpose included local school systems, local Public Health Departments, State and local directors of Easter Seal Agencies, and the Associations for Retarded Children.

Approximately 154 sample participants were identified through these resources. In each case the referring agency/person requested to make the initial contact with the respondent to solicit and encourage their participation in the study. This intermediate step was taken to protect the agency's confidentiality of data and the privacy of the parent.

After this initial communication was made, the Phase II field staff contacted the parents to: (1) further explain the purpose of the study; (2) secure permission for their handicapped child to be included in the study; and (3) confirm an interview date.

Children in the non-served control group and their parents were assessed with the same measures used for Head Start children and parents, except for those that were inappropriate because they related to classroom events or to services the children did not receive.

The majority of the non-served control group assessments were conducted in the parent's homes; however some of the respondents, where it was feasible, elected to utilize the facilities of the referring agency.

The data collection schedule is shown in Table 2.1.

TABLE 2.1: SCHEDULE FOR DATA COLLECTION

Dates	Program Type Head Start	 Non-Head Start	 Non-Served
Begin	October 17, 1977	October 17, 1977	November 7, 1977
End	November 25,1977	November 25,1977	December 30,1977

Data collection activities for the non-served control group were not completed until December 30, 1977, primarily because of the initial difficulties in accessing data (names and addresses, etc., of preschool handicapped children) from some of the referral sources. In addition, some of the non-served group participants were identified after the completion of the primary data collection activities from the Phase II Head Start and non-Head Start programs.

The distribution of handicaps by program type for the 782 children enrolled in programs and 154 non-served is shown in Table 2.2. While the distributions for physically handicapped, specific learning disability, and emotionally disturbed fairly closely approximate the desired goal of 40 cases per handicap, there are other notable deficiences in the sample. The visually impaired, blind, hearing impaired, and deaf children show very low frequencies (as previously discussed), although they are fairly similar to those of the different sample groups. Both goals of forty (40) cases per handicapping condition and equal distributions by program type are not fully met in three other handicap categories (some of which were purposefully over sampled) — speech impaired, health or developmentally impaired, and mentally retarded. The frequency of occurrence of the first two handicapping conditions is twice as high (29% compared with 15% and 17% compared with 9%, respectively) in Head Start programs, while the later condition occurs at three times the rate (37% compared with 11%) in the non-Head Start programs. These distributions present significant problems which have to be accommodated for in analysis efforts.

SUBSAMPLES

Two subsamples of the study groups were identified and selected for special study objectives. One special objective required a small subsample of at least 100 handicapped children to be administered the Learning Accomplishment Profile - Diagnostic edition (LAP-D). The purpose of this objective was to verify the accuracy

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TABLE 2.2

DISTRIBUTION OF SAMPLE FOR PROGRAM TYPE AND HANDICAPPING CONDITION

PRIMARY HANDICAPPING CONDITION	PROGRAM TYPE		
	Head Start % of Column	Non-Head Start Programs % of Column	Non-Served % of Column
Visually impaired	4.7 (N=20)	0.6 (N=2)	1.9 (N=3)
Blind	0.2 (N=1)	0.6 (N=2)	1.9 (N=3)
Hearing impaired	4.4 (N=19)	3.1 (N=11)	1.2 (N=2)
Deaf	1.2 (N=5)	0.6 (N=2)	0.6 (N=1)
Physical handicap	18.6 (N=80)	18.3 (N=65)	16.2 (N=25)
Speech impaired	28.9 (N=124)	15.3 (N=54)	39.6 (N=61)
Health or developmentally impaired	17.2 (N=74)	8.8 (N=31)	12.4 (N=19)
Mentally retarded	11.4 (N=49)	36.5 (N=129)	9.2 (N=14)
Specific learning disability	6.3 (N=27)	6.8 (N=24)	0.0
Serious emotional disturbance	7.0 (N=30)	9.3 (N=33)	6.6 (N=10)
Not specified			10.4 (N=16)
TOTAL 100.0* (N=936)	45.8* (N=429)	37.7* (N=353)	16.5* (N=154)

*Percent of row.

of parent report information secured from the Alpern-Boll Developmental Profile and the psychometric equivalence of the two scales. A total of sixty-five (65) speech impaired and sixty-five emotionally disturbed children were selected from the coded child lists and the programs were asked to provide a quiet location in order to administer the LAP-D. Four of the children were enrolled in programs which were dropped so that a final subsample of 126 were retained for analysis.

The second special objective also required a subsample of approximately 100 respondents. The teachers of 125 randomly identified handicapped children were selected to receive the teacher short form of the Alpern-Boll. The purpose of the second objective was to determine the extent to which the teacher short form could be used as an alternate form to the parent administered form (already scheduled to be administered to the parent) in the event of parent attrition. Four of the teachers were deleted when the programs they taught in were dropped leaving a final group of 121 for the correlation study between the two forms.

3

INSTRUMENTATION ISSUES

Twelve primary instruments were used to collect pretest data for the study. This chapter discusses some of the measurement issues of concern with three of these instruments. The Alpern-Boll Developmental Profile presented two key issues for consideration: whether parent report data could be validly considered as a substitute for a direct assessment of the child; and the equivalency of a short teacher-form which could be used in the event of parent attrition. Also, two measures of attitude toward the concept of mainstreaming were developed and a review of the measurement characteristics of these scales for this study sample is provided.

ALPERN-BOLL DEVELOPMENTAL PROFILE

Since all three primary study objectives (see page 1.2) require developmental assessment of each handicapped child, it was necessary to select an instrument that was sensitive both to differences across several distinct abilities and also to areas of growth and development during the pre-post interim. The Alpern-Boll Developmental Profile, a parent report instrument which assesses developmental growth of the child (See Appendix II), was selected as the primary measure.

However, previous experience with the use of parent-report information to assess growth and development of the child by ACYF indicated that the validity of a direct functional child assessment might be substantially better then once removed parent-report data. The Learning Accomplishment Profile-Diagnostic edition (LAP-D) is a direct functional assessment of the child which was considered as the primary dependent measure. The Alpern-Boll was selected for the following reasons:

1. reduces respondent burden;
2. minimizes classroom disruption by not requiring the child be present for administration;
3. reduces the expense and time of training certified evaluators;
4. offers one additional measure (social-emotional) in an area deemed of critical importance at the pre-school level;
5. provides a full range of measurement in the Self Help area;
6. provides a streamlined measure of physical development skills.

Because the validity of using the parent report information was considered questionable by ACYF it was determined to assess the validity of information obtained from the Alpern-Boll compared with the direct child assessment data secured from the LAP-D. A secondary study objective was specified:

- how well does the Alpern-Boll serve as a valid alternative to the LAP-D?

Another important issue of concern with respect to the Alpern-Boll is the need to identify a backup source for the developmental growth data in the event the original respondent is unavailable for posttest data collection. A teacher administered short form of the Alpern-Boll was developed by Appalachian Educational Laboratory, Inc., Charleston, West Virginia. Although this teacher short form was selected as a backup measure, there was no measurement information on the equivalence of the two forms for the present study population. The reliability data supplied by the Appalachian Education Laboratory provided data for a predominately non-handicapped population. Therefore another secondary study objective was specified:

- how well does a teacher "Short Form" serve as an alternate form for the Alpern-Boll (in the event of parent attrition or posttest absence)?

Study Objective I: Assessment of the *Alpern-Boll Developmental Profile* as a valid alternative to the *Learning Accomplishment Profile-Diagnostic Edition.*

Even though an item-by-item inspection of the two assessment profiles suggests that both instruments assess similar skills, such inspection does not provide information on how close the two measures are for any given group of children. It was necessary to obtain information with which to more precisely estimate the extent of measurement correspondence for these two developmental assessments in order to validate use of the Alpern-Boll.

The LAP-D was administered to a subset of 126 children for whom Alpern-Boll profiles were also collected. Table 3.1 presents the relevant Pearson product-moment correlations for the 126 children who had both assessments administered.

TABLE 3.1

ALPERN-BOLL AND LAP-D CORRELATIONS

LAP-D ALPERN-BOLL	Fine Motor	Gross Motor	Language	Cognitive	Total
Physical Age	0.46	0.47			
Academic Age			0.63	0.71	
Communication Age			0.64		
IQ Equivalency					0.45

N=126 Signifigance >.001

The relatively higher correlations (.71, .63, .64) of the Language and Cognitive scales of the LAP-D with the academic and communication scales of the Alpern-Boll support the initial conclusions of content correspondence for these scales (discussed in Appendix II). Since these areas are usually thought of as the critical skills for school success, the higher those correlations, the better the Alpern-Boll fulfills its role as a valid alternative for the LAP-D.

In fact, there is some reason to believe that the obtained correlation coefficients are minimal estimates and that truer estimates would raise the correlations substantially. When conducting correlation analysis with samples where the sample range is restricted in some manner, the resulting correlation coefficients tend to be artificially low. This is demonstrated in Figures 3.1 and 3.2 which illustrate typical scatter plots of the corresponding scores on two measures. The illustration in Figure 3.1 shows the scatter plot for two measures that have a high positive correlation

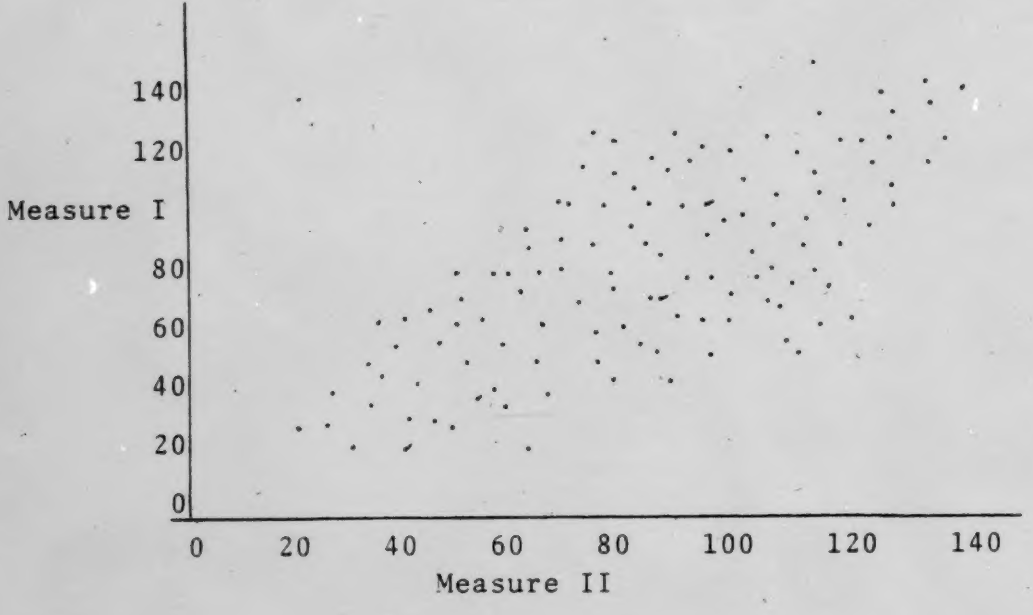

FIGURE 3.1: SCATTERPLOT OF A MODERATELY HIGH CORRELATION FOR TWO MEASURES

with each other (about +.90). The range of possible scores for each measure is from about 20 to about 140 on the scales provided.

Suppose, however, that something happens when administering the tests so that only a restricted range of the available sample receives the tests. If the range is from 60 to 80, for example, the resulting scatterplot and computed correlation will appear quite different. Figure 3.2 illustrates the "new" scatterplot in the inset. Visual inspection of this "new" scatterplot indicates that there is probably very little relationship between Measure I and Measure II.

To the extent that the sample children receiving both the Alpern-Boll and the LAP-D represent a restricted range the correlation between the two measures will be artificially lowered. Since both the study sample itself and the correlation sample is composed

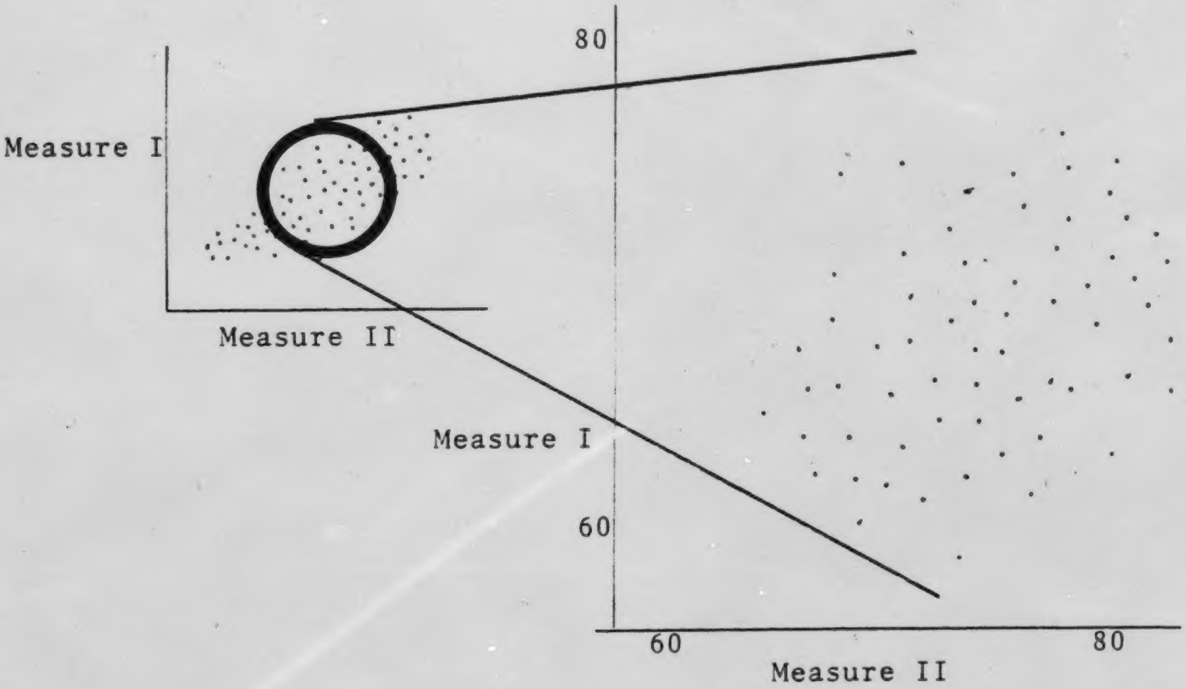

FIGURE 3.2: INSET FOR RESTRICTED RANGE OF 60 TO 80 SHOWING "NEW" SCATTERPLOT

of only handicapped preschool children it is highly probable that this sample of 126 children used for the correlation analysis has some restrictions in overall ability ranges. This would affect the computed correlations by artifically lowering them.

The effect of restricting the range of a group of scores on artificially lowering measures of association for two instruments has already been discussed. In a similar way, restricting the range within which an individual score can fall may artificially lower the sensitivity of the measure and thus the capacity to identify changes in true scores as reflected by changes in earned scores. When considering the validity of the Alpern-Boll as an alternative to the LAP-D, the sensitivity of each measure to changes in growth and development is crucial. As reviewed in Appendix II, the administration directions for the LAP-D provide instructions for a "ceiling" is achieved when the child misses three out of five items. No further items of greater difficulty are administered since it is assumed that the child will miss all items beyond his "ceiling." However, the Alpern-Boll procedures for handicapped (atypical) children require administration of each entire subscale up to a triple "basal" or "ceiling." This procedure recognizes the greater variability of performances across several assessment areas and assures more opportunity for a wider range of scores.

This difference in administration instructions can affect the sensitivity of the instrument to changes in developmental skills. Table 3.2 presents the ranges of scores found on both the LAP-D and the Alpern-Boll. Only the range of scores for the "Cognitive" scale of the LAP-D is fairly large compared with the ranges of the Alpern-Boll. A review of the scatterplots for the correlations confirms that the LAP-D scores tend to be lower and of a narrower range.

TABLE 3.2
RANGE FROM LOWEST TO HIGHEST SCORES FOR ALPERN-BOLL AND LAP-D

SCALE	Measure					
	ALPERN-BOLL			LAP-D		
	Lowest Score	Highest Score	Range of Scores	Lowest Score	Highest Score	Range of Scores
Academic Age Cognitive	20	82	66	9	88	72
Communication Age Language	24	96	72	8	53	45
Physical Age	18	116	98			
Gross Motor				25	78	53
Fine Motor				28	74	46

In situations where the developmental changes can be expected to be very small, even minor blunting of the sensitivity could mast important (although small) changes.

While the range restrictions do not necessarily affect group performances, such restrictions tend to contribute adversely to the tests' sensitivity to change and can contribute to lowered correlation coefficients. This blunting of sensitivity is particularly damaging at the ability extremes, and even more so with handicapped children since developmental changes for this group tend to be more gradual and less pronounced.

The result is that the LAP-D could tend to be somewhat less sensitive to minor developmental changes for this study population. The Alpern-Boll, on the other hand, could yield slightly more accurate true score estimates. This would increase sensitivity to small developmental changes and would also remove a small amount of residual variance from prediction equations.

Another factor contributing to the relatively low correlations between the Alpern-Boll and the LAP-D on the physical and Fine/Gross Motor scales could be "test fatigue." The LAP-D is typically administered in two or three sessions so that the Fine/Gross Motor scales are administered by themselves as with only one other scale. The pretest administration procedures required the entire scale to be administered in one session, with the Fine/Gross Motor scales being last. Field staff reported evidence of fatigue and inattention on these latter scales.

Summary and Conclusion

1. The Alpern-Boll subscales that are usually thought of as the best predictors of school success (academic, communication, and IQ equivalency) were the scales which best correlated with content similar scales on the LAP-D and there is reason to believe that true score correlations should be even higher.
2. The administration procedures for the Alpern-Boll provide better assurance for sensitivity of the measure to change and less opportunity for imposed range restrictions.

While not psychometrically equivalent, the Alpern-Boll Developmental Profile can serve as a comparable measure to the LAP-D for purposes of measuring change in short term development across the specified abilities.

Study Objective II: The Teacher "Short Form" of the *Alpern-Boll Developmental Profile* as an Alternative Form in the Event of Parent Attrition or Posttest Absence

All 105 programs and 782 parents have agreed to participate in both the pre- and posttest data collection efforts. In the event of parental absence for the posttest, however, the primary dependent measure of developmental growth for the child (the Alpern-Boll) would be unobtainable. Applied Management Sciences, has participated that even with concerted follow-up efforts and parent incentives some amount of attrition can be expected.

If this attrition should occur in the handicap categories where the sample size is close to or greater than the desired goal of fifty (50) cases, then these cases could simply be dropped from any analysis which uses the Alpern-Boll. However, if this attrition should occur in handicap categories in which the sample size is very small to begin with, elimination of even a single case could be damaging to analysis efforts. It is crucial, therefore, to carefully consider alternatives to eliminating a case from the study sample.

The most desired alternative would be to invest the additional effort and resources that would eventually permit the parent to be interviewed. This might mean traveling to a separate interview site or returning to the original site at a more convenient time. If this does not prove to be feasible (for example, if the parent is ill, deceased or cannot be located), then special effort to collect the data from another respondent must be made.

Applied Management Sciences, Inc., has anticipated such a possibility. Field staff were directed to administer to the teachers of 121 randomly selected children, a short "teacher form" of the Alpern-Boll Developmental Profile developed by the Appalachian Educational Laboratory, West Virginia. This information could then be used to determine the suitability of the short "teacher form" as an alternative in the event that the parent could not be interviewed to provide the child growth and development information.

Table 3.3 presents the Pearson product-moment correlation coefficients for the two forms of the Alpern-Boll. Two of the subscales (Academic Age and Communication Age scales) and the IQ equivalency score show good correlation coefficients for the two forms. These three correlation coefficients assume even more significance in light of the previous discussion concerning restriction of ranges, a factor which can be expected to artificially lower these coefficients also. The three scales with relatively low correlation coefficients (Physical, Self Help, and Social Age Scales) do not seem to provide enough explained variance to make their inclusion as an alternative measure useful. While these correlation coefficients can also be expected to be lower than might be achieved with a better distributed range of cases, there appears to be considerable variability between scores that cannot otherwise

TABLE 3.3

CORRELATION COEFFICIENTS FOR THE ALPERN-BOLL DEVELOPMENTAL PROFILE PARENT ADMINISTERED FORM AND TEACHER ADMINISTERED SHORT FORM

Parent Administered \ Teacher Administered	IQ Equivalency	Physical Age	Self Help Age	Social Age	Academic Age	Communication Age
IQ Equivalency	0.69					
Physical Age		0.47				
Self Help Age			0.57			
Social Age				0.54		
Academic Age					0.74	
Communication Age						0.69

N=121 Significance >.001

be accounted for. Analysis of this variability suggests that baseline unfamiliarity with the child on the part of the teacher has resulted in excessive variation between the two forms of the Alpern-Boll. Although both the Academic Age scale and the Communication Age scale show correlations which are adequate, they are expected to be low estimates. If the excessive variability between the long and short forms of the Alpern-Boll is a consequence of teacher unfamiliarity with the actual capabilities of handicapped children at the beginning of a program year, then increased teacher familiarity should result in stronger long/short Alpern-Boll correlations at the end of the program year. Based on this assumption, Applied Management Sciences will continue with plans to use the short form of the Alpern-Boll to collect developmental data in those cases in which parents cannot be contacted during the posttest. However, Applied Management Sciences will also conduct another long form/short form posttest validity study similar to the one that was conducted during the pretest in order to verify the assumption of greater posttest correlation.

Summary and Conclusions. The most desirable alternative to the scheduled posttest parent interview with the Alpern-Boll is a second effort to locate and interview the parent at a more convenient time or location. However, in the event that it is not feasible, the short "teacher-form" of the Alpern-Boll could be effectively used. At present it appears that the analysis using this alternate form is limited to the use of the IQ equivalency score, the Academic scale and the Communication scale. This seems entirely possible since these are the three scales most frequently associated with school success and are likely to be included in most analysis efforts with the Alpern-Boll.

However, the teacher short form will again be administered to a sample of 120 during posttest data collection in order to examine the possibility of increased correlation between the two scales resulting from greater teacher familiarity with the child. Should an original respondent be unavailable for posttest data collection and should alternative methods to contact that respondent be unsuccessful, then the teacher administered short form of the Alpern-Boll will be used. The IQ equivalency score, the Academic Age, and the Communication Age scores of the short form should be used in the final data analysis effort. If posttest analysis reveals the expected increase in correlation coefficients, then it is possible that additional scales will be used as well.

MEASURES OF ATTITUDE TOWARDS MAINSTREAMING THE HANDICAPPED

Two attitude scales were constructed by Applied Management Sciences, Inc., for use in measuring relative attitudes toward the concept of mainstreaming handicapped children. The "Parent Interview Schedule" consists of nine items in which the questions to parents are phrased with respect to their child. The "Teacher Attitudes and Opinions Interview" consists of 19 items comprising two scales and yielding a total scale score. These items are not specific to a given child. Rather they refer specifically to the teacher and referenced handicapped children only in general.

Attitude toward some element of a program, whether by a parent or a teacher, may obscure or otherwise effect a child's performance on some measure, or could mask the effects of other elements of the program. Attitude is known to be a powerful correlate of many performance levels. It is not always clear whether a given attitude is produced by some performance, whether the performance is only made possible because of the attitude held by the individual, or whether the two interact delicately so as to continually modify each other. While the causal relationship is not always apparent, it is still important to describe how these attitudes differ with respect to certain demographic variables.

These two attitude scales were constructed in part from item pools developed by Applied Management Sciences and in part from other attitude measures. Because these scales are non-standard measures, it is also necessary to describe the measurement characteristics of each scale and to confirm both the content validity of the scales and the suitability of each scale to serve as a measure of the desired attitude.

"Parent Interview Schedule"

This nine item questionnaire assessed the parents' attitude toward having their child enrolled in a "mainstreamed" program compared with enrollment in a more specialized program with other handicapped children. Parents could respond to each item with "yes," "no," or "can't say." Responses that indicate a positive attitude toward mainstreaming were weighted with a score of 3, neutral responses received a 2, and negative responses received a 1. For scoring purposes, the nine items were summed. A score of 9 would be the lowest possible score indicating a negative attitude overall towards mainstreaming. A total score of 27 is the highest possible and indicates a positive attitude towards having a child placed in a mainstreamed program.

Table 3.4 presents the Pearson product-moment correlations for each item and the total score. Inter-item correlations are especially low while item-total correlations are considerably higher.

This suggests that the measurement content of each item has little overlap with other items, and that each item contributes some unique measure to the total score. Also, this suggests that the questionnaire is relatively efficient because it does not excessively duplicate content measurement, although the real utility of the scale is determined by its sensitivity to extraneous measurement error.

TABLE 3.4

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS FOR ITEMS AND TOTAL SCORE ON THE PARENT INTERVIEW SCHEDULE

	Questionnaire Items	Total Score	Items 1	2	3	4	5	6	7	8	9
1.	I feel my child could do better in a more specialized program for her/his type of handicap.	.53									
2.	I think some children don't like to be in the same class with handicapped children	.50	.14								
3.	I think my child gets along better at home since she/he has been in school with children who don't have handicaps.	.39	.07	.06							
4.	I think it's best for handicapped children to be in a classroom with children who don't have handicaps.	.52	.15	.18	.09						
5.	I think my child would have more friends if she/he were in a class of children with similar handicaps.	.49	.26	.19	.01	.13					
6.	I think that handicapped children in classes with other children get along better with other people.	.45	.08	.06	.22	.31	.06				
7.	Handicapped children are more like other children than different.	.39	.11	.12	.02	.13	.12	.11			
8.	I think my child is afraid to try when she/he is competing with other children.	.39	.18	.17	.06	.06	.22	.01	.05		
9.	I think children without handicaps are less likely to make fun of handicapped children if they're in the same class together.	.41	.13	.08	.12	.16	.02	.16	.06	.03	

N = 481 (number of mainstreamed children)

Extraneous measurement error could occur when some other variable is also being measured by the questions. For example, a child who doesn't like big dogs, may report that he/she doesn't like dogs when questioned about several large animals, including dogs. If a conclusion were made that this child does not like dogs, it would only be partially correct, since there is considerable measurement error present in the way the child qas questioned. The "Parent Interview Schedule" is designed to assess the attitude of parents towards mainstreaming their handicapped child. There is one extraneous, but related, variable which could affect measurement of this construct: the attitude of the parent toward the specific program the child is enrolled in. Two measures of this are provided in the parent interview instrument. One question asks if the parent believes the child will benefit from the program they are enrolled in. Responses range on a four item scale from "greatly" to "no." The second question asks if the parent believes the current program is the best one available (responses; yes = 1, no = 2).

Table 3.5 presents the correlation coefficients of each item with the total score controlling for (partialling out) the effects of these two questions. The table shows very little change in correlation coefficients from the first order coefficients presented in Table 3.4. This indicates that parental attitude toward mainstreaming as measured by the "Parent Interview Schedule" is free from the confounding effects of their attitude toward the specific program their child is enrolled in. A similar analysis of this scale controlling for the effects of whether the child is mainstreamed or not is not possible, since this scale was not administered to parents of non-mainstreamed children. The scale was not administered in order to keep respondent burden to a minimum, to avoid raising this issue with parents whose children were in self-contained or segregated programs, and because data from this group were not required for the specified analysis plan.

Summary and Conclusions. The nine item "Parent Interview Schedule" is an efficient measure of parental attitude towards mainstreaming a handicapped child and is not confounded by the attitude of the parent towards the specific program the child is enrolled in. The "Parent Interview Schedule" is a brief but efficient measure of parental attitude towards the mainstreaming of a handicapped child.

TABLE 3.5

SECOND ORDER CORRELATION COEFFICIENTS FOR ITEMS WITH THE TOTAL SCORE ON THE PARENT INTERVIEW SCHEDULE CONTROLLING FOR PARENT ATTITUDES TOWARD THE SPECIFIC PROGRAM

Questionnaire Items	Controlling for "Best Program"	Controlling for "Benefit from Program"	Controlling for Both
	Total Score	Total Score	Total Score
1. I feel my child could do better in a more specialized program for his/her type of handicap	.51	.47	.48
2. I think some children don't like to be in the same class with handicapped children	.51	.37	.49
3. I think my child gets along better at home since she/he has been in school with children who don't have handicaps	.38	.37	.37
4. I think it's best for handicapped children to be in a classroom with children who don't have handicaps	.52	.49	.50
5. I think my child would have more friends if she/he were in a class of children with similar handicaps	.49	.48	.48
6. I think that handicapped children in classes with other children get along better with other people	.44	.44	.44
7. Handicapped children are more like other children than different	.40	.39	.40
8. I think my child is afraid to try when she/he is competing with other children	.40	.38	.39
9. I think children without handicaps are less likely to make fun of handicapped children if they're in the same class together	.41	.40	.41

N = 481 (number of mainstreamed children)

"Teacher Attitudes and Opinions Interview"

This attitude measure is comprised of a total of 19 questions; there are two scales. Scale I contains 13 questions and assessed general attitude towards the handicapped child. Scale II contains 6 questions and assessed the teacher's view of obstacles or impediments to mainstreaming the handicapped child. All questions on the "Likert type" measure were summed for scale scores and for the total score.

Scale construction involved sorting relevant questionnaire items from a pool of 62 possible items based on specialists judgment of of the content validity of each item. The item pool was derived from the Teacher Opinions of Special Education and Special Pupils scale developed by Bruce Bau, Warren Gleckel and Idajean Windell (1975). Administration time for the item pool scale was considered too lengthy and also contained some irrelevant information. Questionnaire items (shown in Table 3.6) were selected to fall into the

TABLE 3.6

QUESTIONNAIRE ITEMS FOR THE "TEACHER ATTITUDES AND OPINIONS INTERVIEW"

1. I like to work with handicapped children.
2. I feel it is good for the normal children to be in the same classroom as handicapped children.
3. Working with handicapped children takes too much classroom time away from normal children.
4. I think mainstreaming is harmful to normal children.
5. It's hard for me to make handicapped children feel "at home" in my class.
6. I feel mainstreaming is harmful to many handicapped children.
7. For me working with handicapped children is difficult in a regular classroom setting.
8. It seems to me that handicapped children learn more in special classes that do not include normal children.
9. I feel that handicapped children need to be made aware of their limitations
10. I am afraid of working with some handicapped children.
11. It seems to me that handicapped children tend to "give up" in the regular classroom setting.
12. The integration of handicapped children in regular classes slows down the learning of the other children in my class.
13. Planning instruction for both handicapped and normal children demands too much additional teacher preparation time.
14. I think handicapped children should be mainstreamed, but they should have teachers with more special training than I have.
15. Handicapped children are more like normal children than they are different.
16. I think that normal and handicapped children get along well with one another.
17. It seems to me that handicapped children are withdrawn around the normal children in the class.
18. I think normal children do not try as hard around handicapped children.
19. Being in the same class with normal children helps the social development of handicapped children.

two categories of "impediments to mainstreaming" and "attitudes toward mainstreaming" in order to shorten the administration time. Since the validity of using these two scales separately or as a summed total has not been determined, the following analyses from the baseline data are directed towards verifying the utility of this scale. Table 3.7 presents the Pearson product-moment correlations for the scales and the total scale.

TABLE 3.7

PEARSON PRODUCT-MOMENT CORRELATIONS FOR THE TEACHER ATTITUDES AND OPINIONS INTERVIEW

	Total	Scale I	Scale II
Total	*	*	*
Scale I	.98	*	*
Scale II	.84	.68	*

N=674

The correlation between Scale I and Scale II shows a positive relationship. As the teacher identifies fewer obstacles and impediments to mainstreaming handicapped children (Scale II) their attitude, in general, towards handicapped children (Scale I) is more positive. Scale I is the longer scale (13 items) and, as expected, shows a slightly stronger relationship with the total score.

While Scale I and II show a positive relationship ($r=.68$) there is enough unique or unexplained variance ($1-r^2=54\%$) to justify separate considerations for analysis purposes. This is further indicated by the difference in correlation cofficients for each scale with the total. The population of respondents who provided the attitudinal information for these scales do not show evidence of range restrictions on this variable. Therefore, for psychometric purposes of determining alternate form reliability (such as this) a correlation of .80 or higher would be deemed desirable. Overall this suggests that the two scales measure somewhat distinct attitudes and that summing the two scales for a single measure is not useful.

Table 3.8 presents statistical measures of the distribution for each scale. While superficial measures of the distributions for Scale I and Scale II appear to be additive with respect to the total score (indications of range for example), such indications do not follow for other measures. Both the standard deviation and standard error for each scale do not nearly approximate estimates of deviation and error which are much larger for the total scale.

TABLE 3.8

MEASURES OF DISTRIBUTION FOR THE TEACHER ATTITUDES AND OPINIONS INTERVIEW

Measures	Total	Scale I	Scale II
Range: Low	18.00	13.00	5.00
High	108.00	77.00	35.00
Standard Deviation	25.69	16.56	5.49
Standard Error	0.92	0.59	0.21
Skewness	0.85	0.61	-0.45

Additionally, the total scale appears to be considerably more skewed than would be suggested by combining the two scales.

Summary and Conclusions. As separate measures the two subscales of the "Teacher Attitudes and Opinions Interview" show some positive correlation with each other although leaving more variance "unexplained" than accounted for by the two measures. Summing the two scales to produce a single measure increases variability and produces a distribution for the total scale that is substantially different from either distribution for the two scales separately. In addition, the item content of the two scales differs enough in the type of information gathered to make combining the scales questionable. Scale I and Scale II of the "Teacher Attitude and Opinions Interview" should be treated as separate measures. A summed total should not be used in analysis efforts.

4

GROUP DIFFERENCES

INTRODUCTION

As indicated in Chapter 1, the study design for Phase II of the evaluation of Head Start services to the handicapped includes provisions for a comparative study of child-specific outcomes among three groups: children enrolled in Head Start programs, children enrolled in non-Head Start programs and children not enrolled in any program of services. Ideally, placement of children in each of these three groups should occur randomly to avoid confounding the study outcomes with systematic group biasis. However, random assignment of subjects in the present study was neither ethical nor economically feasible. Consequently, the proposed group comparisons may also require examination of differential outcomes. Even a cursory review of the distribution of handicapping conditions for each group (Chapter 2, Table 2.1) indicates that the groups are not equivalent in several respects. This will require the comparison of non-equivalent groups.

Much has been written about the pitfalls of analyses involving non-equivalent groups. Lord (1967) for example, goes so far as to say that "...there simply is no logical or statistical procedure that can be counted on to make proper allowances for uncontrolled preexisting differences between groups." Other writers such as

Porter and Chibucas (1974, 1975), Kenny (1975) Linn and Werts (1977), Tallmadge and Horst (1976) and Magidson (1977) approach the issue from a more positive standpoint, each suggesting various analytical strategies that should be considered in the non-equivalent group situation. Irrespective of the merits of the positions taken by these writers, though, the critical issue in study design using non-equivalent groups is the specification of the relevant dimensions which differentiate the study groups in question. Unless the analyst is confident that all such diversions are accounted for and that each can be measured with a reasonable degree of validity, non-equivalent group comparisons, no matter which adjustment strategy is utilized, will generate problematic conclusions at best.

Therefore, the primary purpose of this chapter is to review all of the variables measured during the pretest data collection effort and determine those variables where differences between groups exist which will require special statistical consideration during pretest-posttest analyses. Variables reviewed for this purpose are the five key variable groups which were defined in Chapter 1.

A second function of this chapter is to guide data reduction efforts and the development of composite variables. This is a critical task for the study, since over 400 distinct variables have been identified for analytical consideration. This large number of variables affects the usefulness of the model (Chapter 1) in depicting causal relationships. Reducing the number of variables being considered, will improve the statistical strategies used to evaluate the model. Variables which add more variance than they explain, variables which contribute no significant effects, and variables which mask or obscure the effects of other variables must either be eliminated or controlled for (statistically or in the methodological design). Clearly, many of these variables are high correlated and it may be possible to use one or two variables as "indicators" for an entire variable set (e.g., program characteristics). This would greatly facilitate the efficient testing of the model presented in Chapter 1. In addition, many of the 400 variables may be invariant or uncorrelated with respect to outcome measures. If those measures which are uncorrelated with outcome measures are eliminated from consideration this would allow for the development of a simpler and more straightforward set of variables for analytical consideration.

Both issues of concern in this chapter were addressed concurrently utilizing the same analytical techniques. That is, an investigation of study group differences with respect to characteristics of the child and family also allowed an assessment of which variables could be reasonably eliminated from further analysis or replaced by composite variables, or other variables serving as "indicators". Therefore, this chapter is organized by the key variable groups (rather than by basic chapter issues):

personal characteristics of the child	developmental status (including social competency) • cognitive • social-emotional • motoric • self-help • language primary handicap/ severity level previous program experience chronological age
attitudes and characteristics of the child's family	family characteristics • structure • income • occupation • ethnicity

	parent support of child development
	parental attitudes about mainstreaming/ child's programs
	parent educational and familial values
attitudes and characteristics of the child's teacher	teacher characteristics ● experience ● education ● training ● salary
	attitudes about mainstreaming/ handicapped children
	teacher's perceptions or organizational support
	teacher's educational values (including perceptions of appropriate parent roles)
program characteristics	program size length of service to handicapped program structure mainstreaming options funding level use of community-resources classroom structure
classroom integration	degree of peer/child interaction
	degree of child/staff interaction
	degree of classroom integration

After a review of each variable group, recommendations are presented on how study data should be treated in up-coming pretest/ posttest comparative analyses with respect to the two issues discussed above. It should also be noted that for hypothesis testing purposes, a probability level of .01 will be adhered to for statistical tests of significance. Because large sample sizes produce very large degrees of freedom, unusually small differences can suddenly assume statistical significance, so minimum probabilities for error are necessary.

PERSONAL CHARACTERISTICS OF THE CHILD

Two general types of information were collected on children participating in the study. The independent variables specific to the child included information that is descriptive and relatively static such as sex, handicapping condition, severity, chronological age, and previous enrollment in other programs. The dependent measures of child progress included information that is relatively dynamic (that is, changes would be expected to occur over time or as the result of certain other variables) and assessed developmental growth. Each of the independent variables effects these dependent measures differently. The extent of the association of these variables determine which variables must be controlled for or eliminated from the final data analysis efforts.

Descriptive and Static Information (Independent Variables)

Handicapping Condition. Chapter II describes the sampling plan and presents the distribution of the study sample by handicapping condition and by study group (Table 2.1 repeated here for convenience as Table 4.1). This table illustrates:

1. All handicapping conditions are not equally represented.

   Speech impaired children comprise fully one fourth of the sample, yet blind and deaf children comprise less than 1 percent each. Only the health or developmentally impaired and seriously emotionally disturbed children appear to be represented at a level approximating 10 percent of the sample (3% and 8% respectively).

2. Each handicapping condition is not equally represented in each study group.

Blind, deaf, physically handicapped and seriously emotionally disturbed are the only handicapping categories which appear to be distributed with equal frequency across all three study groups. Major deviation in frequency of occurrence are present for speech impaired and health or developmentally impaired (twice as frequent in Head Start compared with non-Head Start and one third as frequent in the non-served group) and mentally retarded (three times as frequent in non-Head Start compared with Head Start and four times compared with the non-served group).

TABLE 4.1

DISTRIBUTION OF SAMPLE FOR PROGRAM TYPE AND HANDICAPPING CONDITION

PRIMARY HANDICAPPING CONDITION	Total % of Column	PROGRAM TYPE		
		Head Start % of Column	Non-Head Start Programs % of Column	Non-Served % of Column
Visually impaired	2.7 (N=25)	4.7 (N=20)	0.6 (N=2)	1.9 (N=3)
Blind	0.6 (N=6)	0.2 (N=1)	0.6 (N=2)	1.9 (N=3)
Hearing impaired	3.5 (N=32)	4.4 (N=19)	3.1 (N=11)	1.2 (N=2)
Deaf	0.8 (N=8)	1.2 (N=5)	0.6 (N=2)	0.6 (N=1)
Physical handicap	18.3 (N=170)	18.6 (N=80)	18.3 (N=65)	16.2 (N=25)
Speech impaired	25.5 (N=239)	28.9 (N=124)	15.3 (N=54)	39.6 (N=61)
Health or developmentally impaired	13.2 (N=124)	17.2 (N=74)	8.8 (N=31)	12.4 (N=19)
Mentally retarded	20.5 (N=192)	11.4 (N=49)	36.5 (N=129)	9.2 (N=14)
Specific learning disability	5.4 (N=51)	6.3 (N=27)	6.8 (N=24)	0.0
Serious emotional disturbance	7.8 (N=73)	7.0 (N=30)	9.3 (N=33)	6.6 (N=10)
Not specified	1.7 (N=16)			10.4 (N=16)
TOTAL	100.0 (N=936)	45.8* (N=429)	37.7* (N=353)	16.5* (N=154)

*Percent of row

The three study groups differ with respect to representation of handicapping condition. Comparison of the three groups will consider biases occurring in the comparison samples. It would not be appropriate, for example, to compare the growth and development of 20 visually impaired Head Start children with 2 non-Head Start children, or to compare the overall progress of Head Start children (heavily represented by speech impaired-29%) with the overall progress of non-Head Start programs (heavily represented by mentally retarded-37%) unless this differential representation were controlled for.

Designation of Handicapping condition for the non-served group were not always diagnostic classifications obtained from professional diagnosticians. In some instances parents or other professionals who were somewhat familiar with the child provided that information. For this reason, designation of handicapping condition for the non-served group will be confirmed during posttest data collection, and analysis references to the non-served group are limited to the aggregate group only.

Severity Level of Handicap. Table 4.2 presents the distribution of severity level for each handicapping condition. (Descriptors of severity levels and diagnostic classifications are provided in the Appendix in Tables A1 and A2 respectively.) Table 4.2 frequently reported are the mild or moderate levels. While one-fourth of the hearing impaired are reported to be profoundly handicapped, no other handicapping condition exceeds 8 percent in that severity level. All handicapping conditions show consistently high frequencies for the moderate and mild severity levels and this suggests that these comprise the major part of the total sample. The effects of severity level ratings and mainstreaming are discussed in Chapter III.

TABLE 4.2

DISTRIBUTION OF HANDICAPPING CONDITION BY SEVERITY OF HANDICAP

PRIMARY HANDICAPPING CONDITION	SEVERITY LEVEL OF HANDICAP			
	Mild % of Row	Moderate % of Row	Severe % of Row	Profound % of Row
Visually Impaired	31.8 (N=9	45.5 (N=10)	18.2 (N=4)	4.5 (N=1)
Blind	NOT APPLICABLE			
Hearing Impaired	30.0 (N=9)	33.3 (N=10)	10.0 (N=3)	26.7 (N=8)
Deaf	NOT APPLICABLE			
Physically Handicapped	22.7 (N=30)	31.8 (N=42)	37.2 (N=49)	8.3 (N=11)
Speech Impaired	27.1 (N=48)	36.7 (N=65)	30.5 (N=54)	5.7 (N=10)
Health or Developmentally Impaired	43.3 (N=45)	34.6 (N=36)	21.2 (N=22)	0.9 (N=1)
Mentally Retarded	30.3 (N=54)	41.0 (N=73)	23.6 (N=42)	5.1 (N=9)
Specific Learning Disability	25.5 (N=13)	58.8 (N=30)	13.7 (N=7)	1.9 (N=1)
Serious Emotional Disturbance	20.6 (N=13)	39.7 (N=25)	38.1 (N=24)	1.6 (N=1)

Sex. Table 4.3 shows that boys are overrepresented (60.4%) in the sample compared with girls (39%) and that this holds for both types of programs. Table 4.4 shows in the distribution of handicapping condition by sex that not only are boys and girls not represented equally, but that significant disparities exist in certain handicapping conditions. Boys occur almost three times as frequently as girls in the emotionally disturbed and speech impaired categories, while there are 10 percent more girls identified as

TABLE 4.3
DISTRIBUTION OF PROGRAM TYPE BY SEX OF CHILD

PROGRAM TYPE	SEX OF CHILD	
	Male % of Row	Female % of Row
Total	60.4 (N=472)	39.6 (N=310)
Head Start	60.1 (N=258)	39.9 (N=171)
Non-Head Start	60.6 (N=214)	39.4 (N=139)

TABLE 4.4
DISTRIBUTION OF HANDICAPPING CONDITION BY SEX OF CHILD

PRIMARY HANDICAPPING CONDITION	SEX OF CHILD	
	Male % of Row	Female % of Row
Visually Impaired	40.9 (N=9)	59.1 (N=13)
Blind	66.7 (N=2)	33.3 (N=1)
Hearing Impaired	60.0 (N=18)	40.0 (N=12)
Deaf	57.1 (N=4)	42.9 (N=3)
Physically Handicapped	54.9 (N=78)	45.1 (N=64)
Speech Impaired	70.6 (N=126)	29.4 (N=53)
Health or Developmentally Impaired	57.7 (N=61)	42.3 (N=45)
Mentally Retarded	57.0 (N=102)	43.0 (N=77)
Specific Learning Disability	52.9 (N=27)	47.1 (N=24)
Serious Emotional Disturbance	71.4 (N=45)	28.6 (N=18)
Total	60.4 (N=472)	39.6 (N=310)

learning disabled (47%) than their proportion in the sample (38%). While this appears contradictory to the literature (which suggests that boys are overrepresented in the learning disabilities area), most of this literature is with mid-level elementary age children, rather than a preschool population.

Any evidence of sex bias, either in the rate of representation, or in the category of handicapping condition, could effect data analysis efforts. If, for example, boys are over-included in the emotionally disturbed category because of aggressive or "acting out" personality characteristics (typical sex role selection stereotype confirmed by Mercer, 1973), then "progress rates" for these children will be notably different from other emotionally disturbed children who are more accurately categorized. Evidence of sex role bias suggests that handicap classification may not be accurate and that variations in rates of progress can be expected within these classifications. Variations in progress rates that are due to classification errors will add substantial error variance and could contribute significantly to confounding of treatment effects with respect to specific handicapping conditions.

Birth Order. Table 4.5 illustrates birth order of the handicapped children in the survey. The consistency across study groups indicates that birth order does not differentiate groups and it does not appear to be necessary to consider this in evaluating treatment effects. The Chi square statistic shows that expected and obtained frequencies do not different significantly.

TABLE 4.5

DISTRIBUTION** OF PROGRAM TYPE BY BIRTH ORDER OF THE HANDICAPPED CHILD

Birth Order	Program Type		
	Head Start % of Column	Non-Head Start % of Column	Non-served % of Column
First born	31.9 (N=137)	29.5 (N=104)	24.0 (N=37)
Last born	38.7 (N=166)	42.8 (N=151	46.1 (N=71)
Only child	6.1 (N=26)	9.3 (N=33)	9.1 (N=14)
Other	23.2 (N=100)	18.4 (N=65)	20.8 (N=32)
TOTAL	45.8* (N=429	37.7* (N=353	16.5* (N=154)

*Percent of Row

**Chi square = 6.155 df = 3 Significance = .104.

Previous Enrollments in Other Programs

Previous enrollment in a program is shown in Table 4.6. The non-Head Start children have a higher rate of previous program attendance (31%) than Head Start children (24%).[1] Since 90 percent of non-Head Start programs are non-mainstreamed settings (that is, they are segregated special programs), these children may have been previously enrolled in a day care program and were eventually referred to the special program they are currently in. There are two key issues concerning previous program experience: whether this experience varies by study group, and the nature of the 13 percent non-served group who report previous enrollment.

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[1] These data are presented in Table 4.46 with additional information on mainstreaming.

TABLE 4.6

DISTRIBUTION OF PROGRAM TYPE BY ENROLLMENT IN PREVIOUS PROGRAM

Enrollment in a Previous Program	Program Type Head Start % of Column	 Non-Head Start % of Column	 Non-served % of Column
Total	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Yes	24.7 (N=106)	31.4 (N=111)	13.0 (N=18)
No	75.3 (N=323)	68.6 (N=242)	87.0 (N=136)

Chi-square = 4.053 df = 1 Significance = .0441 (For Head Start vs. non-Head Start only.)

Table 4.7 shows the length of time of enrollment in previous programs for each study group. The length of previous enrollments appears relatively consistent across both Head Start and non-Head Start programs and involves only a small percent of the sample. Between-group comparisons need not accommodate this, because differences are not statistically significant at the a priori specified level, and because the absolute difference between programs is fairly small. This will be important for within-group analysis, However, since some children had been enrolled in earlier programs, the treatment effects of the current programs may be difficult to fully interpret, because many identified "treatments" are claimed to have both short and long-term effects.

Three children in the non-served sample (1.9%) report previous enrollment for two or more years. According to the responses on open ended items the nature of these program experiences were custodial day care only or clinic based itinerant therapy which was administered only an average of four hours a month. In other words, the program was directed towards remedial efforts only, and not a total child approach. (Table A3 in the appendix presents types of previous program experience.)

TABLE 4.7

DISTRIBUTION OF PROGRAM TYPE BY YEARS OF ENROLLMENT IN A PREVIOUS PROGRAM

Year of Enrollment in Previous Program	Program Type Head Start % of Column	 Non-Head Start % of Column	 Non-served % of Column
Total	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Never enrolled in another program	75.3 (N=323)	68.3 (N=241)	88.3 (N=136)
Less than 1 year	8.4 (N=36)	11.3 (N=40)	6.5 (N=10)
1 year	8.2 (N=35)	9.1 (N=32)	3.2 (N=5)
2 years	5.6 (N=24)	7.4 (N=26)	1.3 (N=2)
3 or more years	2.6 (N=11)	4.0 (N=14)	0.6 (N=1)

Summary and Conclusions

- Handicapping conditions are not equally represented either in the overall sample or across the three identified study groups.
- The milder severity levels of handicaps are represented at a considerably higher rate than the more severe handicapped.
- Boys are overrepresented in the study sample as a whole and three handicap conditions show possible evidence of sex role bias (emotionally disturbed, speech impaired, and learning disabled).
- Children with experience in a previous program are relatively infrequent and those with experience tend to have short term enrollments.

Descriptive and Dynamic Information (Dependent Variables): Developmental Status

The Alpern-Boll is the primary dependent measure for the study and the California Preschool Social Maturity Scale is the secondary measure. It has already been determined that handicapping conditions are not equally represented both with respect to programs or relative to type of handicap. Also, variations of the dependent measures by handicapping condition indicate some additional confounding which must be resolved. Tables 4.8 through 4.17 present the mean Alpern-Boll developmental ages and social maturity percentile scores for Head Start and non-Head Start programs. This information is presented for each handicapping condition separately. The major issue for consideration here is differences in baseline developmental ages and percentile scores which might indicate substantive or qualitative differences in handicapping condition which in turn could effect expected rate of developmental progress. Since changes in pretest-posttest performance on the dependent measures constitute the primary outcome analysis, it is crucial to know how this anticipated "change" will be affected by type of handicap or program. Also shown in each table is the mean severity level rating for that handicapping condition by program type. Severity of handicap was rated by program staff on a four point scale: mild=1, moderate=2, severe=3, and profound=4. The higher the mean rating, the more severe the handicap.

Low Incidence Handicaps

Tables 4.8 through 4.11 present the mean developmental ages and social maturity percentile scores for the visually impaired, blind, hearing impaired, and deaf respectively. Sample sizes for these handicapping conditions are so small that analysis efforts comparing groups require a separate analytical procedure from the other handicapping conditions.

Visually Impaired: A total of 22 children were sampled (Table 4.8), only two of which were non-Head Start children. Mean developmental ages for these two children are consistent with the Head Start sample of 20 except in physical age and self help age. While the non-Head Start sample is one year younger, this age difference is only reflected in the two scales mentioned. Social maturity scores are lower, and may reflect the greater severity level which is indicated.

TABLE 4.8

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF VISUALLY IMPAIRED

Development Measure	Head Start (N=20)	Non-Head Start (N=2)
Chronological Age		
Total Years	4.3	3.2
Total Months	51.2	38.0
Alpern Boll		
Physical Age (in months)	49.2	36.0
Self Help Age (in months)	57.7	49.0
Social Age (in months)	56.6	57.0
Academic Age (in months)	48.0	40.0
Communication Age (in months)	46.8	48.0
IQ Equivalency	94.4	107.0
California Preschool Social Competency Score (percentile)	44.1	34.0
Severity level* (1=mild to 4=severe)	1.9	2.5

*See Appendix Table A1 for descriptors of severity level ratings.

Blind: Only three children were identified. The single blind child in Head Start is one year older than the mean age for the two non-Head Start children. However, developmental ages on the Alpern-Boll for the Head Start child are dramatically different (Table 4.9) from the two non-Head Start children. Both non-Head Start children

TABLE 4.9

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF BLIND

Development Measure	Head Start (N=1)	Non-Head Start (N=2)
Chronological Age		
Total Years	5.4	4.5
Total Months	65.0	53.5
Alpern Boll		
Physical Age (in months)	68.0	23.0
Self Help Age (in months)	82.0	28.0
Social Age (in months)	62.0	39.0
Academic Age (in months)	44.0	20.5
Communication Age (in months)	52.0	28.0
IQ Equivalency	67.0	40.5
California Preschool Social Competency Score (percentile)	32.0	6.5
Severity level* (1=mild to 4=severe)	NA	NA

*See Appendix Table A1 for descriptors of severity level ratings.

have considerably lower developmental ages and social maturity percentile scores - suggesting that they either represent much more severe cases[1] or may be multiply handicapped children.

Hearing Impaired: Thirty children were identified in this category (Table 4.10). Although mean chronological ages are similar (4.5 years and 4.7 years), all developmental ages, especially communication age, tend to be consistently lower for the non-Head Start program, again suggesting more severe handicaps. The mean severity rating (on a scale of mild=1 to severe=4) is 3.6 compared with 1.7

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[1] Severity level for Deaf and Blind cannot be determined since ratings for Deaf and Blind used the rating convention, "does not apply."

TABLE 4.10

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF HEARING IMPAIRED

Development Measure	Head Start (N=19)	Non-Head Start (N=11)
Chronological Age		
Total years	4.5	4.7
Total months	54.2	56.4
Alpern Boll		
Physical Age (in months)	62.4	59.3
Self Help Age (in months)	66.8	58.7
Social Age (in months)	55.3	58.7
Academic Age (in months)	47.3	43.8
Communication Age (in months)	42.9	33.5
IQ Equivalency	86.9	73.6
California Preschool Social Competency Score (percentile)	42.6	51.2
Severity level* (1=mild to 4=severe)	1.7	3.6

*See Appendix Table A1 for descriptors of severity level ratings.

for Head Start and confirms this impression. Social maturity scores for the non-Head Start group, however, are considerably higher.

Deaf: Seven children were sampled - five Head Start and two non-Head Start. The non-Head Start children are almost a full year older (Table 4.11) than the Head Start children. Developmental ages tend to be about one year in advance of their Head Start counterparts and social maturity scores are higher. This holds in communication skills also, in which both groups show about a two year overall deficit but with the younger Head Start group a year behind the non-Head Start group.

Overall, these four handicap categories create the impression that the Head Start sample is not equivalent to the non-Head Start

TABLE 4.11

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF DEAF

Development Measure	Head Start (N=5)	Non-Head Start (N=2)
Chronological Age		
Total Years	4.2	5.0
Total Months	49.8	60.5
Alpern Boll		
Physical Age (in months)	53.6	58.0
Self Help Age (in months)	56.0	68.0
Social Age (in months)	50.6	60.0
Academic Age (in months)	42.4	57.0
Communication Age (in months)	24.4	37.0
IQ Equivalency	86.2	94.5
California Preschool Social Competency Score (percentile)	14.4	38.2
Severity level* (1=mild to 4=severe)	NA	NA

*See Appendix Table A1 for descriptors of severity level ratings.

sample. The small sample sizes alone warrants the conclusion that comparison between "groups" is difficult. Although there is evidence to suggest that the severity level for Head Start children is not as pronounced as the severity level for non-Head Start children, these differences may be due to sampling error because of a small sample size which selected unusually extreme scores. Conclusions about the characteristics of the Head Start and non-Head Start groups cannot be made confidently with such a small sample size. In summary, group comparisons for these handicapping conditions do not seem feasible or methodologically sound. Analysis efforts will be limited to a descriptive approach supplemented by a case study where possible.

Handicapping Conditions with Mixed Severity Level

Tables 4.12 through 4.17 present the mean developmental ages and social maturity scores for the six handicapping conditions not covered in the preceding section ("low incidence handicaps"). There is strong evidence that the Head Start and non-Head Start samples for three of these handicapping conditions are from substantially different populations.

Physically Handicapped: A total of 132 children are included in this sample, 80 Head Start and 52 non-Head Start (Table 4.12). The chronological ages of the two groups are very close (4.6 years compared with 4.2 years) as are the developmental ages for the Academic (47.2 and 41.4) and Communication (48.1 and 43.8) scales and the IQ Equivalency score (87 and 82). Severity level shows

TABLE 4.12

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF PHYSICALLY HANDICAPPED

Developmental Measure	Head Start (N=80)	Non-Head Start (N=52)
Chronological Age		
Total Years	4.6	4.3
Total Months	55.5	51.2
Alpern Boll		
Physical Age (in months)	43.5	25.1
Self Help Age (in months)	57.7	36.8
Social Age (in months)	55.3	45.2
Academic Age (in months)	47.2	41.4
Communication Age (in months)	48.1	43.8
IQ Equivalency	87.2	81.5
California Preschool Social Competency Score (percentile)	44.0	37.4
Severity Level* (1=mild to 4=severe)	2.1	2.6

*See Appendix Table A1 for descriptors of severity level ratings.

the non-Head Start group to be slightly higher (more severe). However, mean developmental assessments in the most relevant areas for this handicap (Physical Age and Self-Help Age) indicate that the differences in severity level may be more substantial. The non-Head Start group shows more than a two year delay in development on the Physical Scale and more than a one year delay on the Self-Help Scale. The Head Start group, however, shows only a one year delay and no delay on the same scale.

	Physical Scale		Self Help Scale	
non-Head Start	**Chronological Age**	**51.2 months**	**Chronological Age**	**51.2 months**
	-Physical Age	**25.1 months**	**Self Help Age**	**36.8 months**
	Developmental Lag	26.1 months	**Developmental Lag**	**14.4 months**
Head Start	Chronological Age	55.5 months	**Chronological Age**	**55.5 months**
	-Physical Age	**43.5 months**	**Self Help Age**	**57.7 months**
	Developmental Lag	**12.0 months**	NO LAG	

Additionally, the measure of social maturity shows the non-Head Start group to be lower than the Head Start group.

Physically handicapped children who show developmental progress on the "physical" scale at a rate equal to 1/2 their chronological age growth (non-Head Start sample) are probably very severely handicapped children. Comparison of groups of children whose growth and development very so substantially is not feasible without utilizing some statistical strategies to controls for or to accommodate the differences.

Health or Developmentally Impaired: The 104 children included in this sample (74 Head Start and 30 non-Head Start) show even more dramatic differences between groups on developmental measures (Table 4.13). Again, chronological ages are very similar: 4.5 years for Head Start and 4.1 years for non-Head Start. However, developmental assessments show the Head Start group to be consistently close to their chronological age, while the non-Head Start

TABLE 4.13

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF HEALTH OR DEVELOPMENTALLY IMPAIRED

Developmental Measure	Head Start (N=74)	Non-Head Start (N=30)
Chronological Age		
Total Years	4.5	4.1
Total Months	53.7	49.5
Alpern Boll		
Physical Age (in months)	52.1	29.6
Self Help Age (in months)	61.4	36.9
Social Age (in months)	55.7	37.5
Academic Age (in months)	46.1	30.5
Communication Age (in months)	47.1	30.5
IQ Equivalency	87.2	66.0
California Preschool Social Competency Score (percentile)	33.0	17.7
Severity Level* (1=mild to 4 = severe)	1.8	1.9

*See Appendix Table A1 for descriptors of severity level ratings.

group is consistently 1 to 1-1/2 years below their chronological age. Similarly, social maturity percentiles for the non-Head Start group are half that of the Head Start group. This suggests a markedly different level of severity for the two groups. Severity ratings, however, are almost identical - 1.9 and 1.9. Either the identified differences in developmental levels are incorrect, or, more likely, ratings of severity level are grossly inaccurate. Difficulties with the criterion referent for severity ratings will be discussed in greater detail later in this section. Where obvious developmental differences exist, such as in this example, then severity level ratings must be reconfirmed.

Mentally Retarded: Table 4.14 presents the mean developmental scores for the 49 Head Start and 129 non-Head Start children in this sample. Again, the average ages of the two groups are similar, 5.0 years for the Head Start group and 4.7 years for the non-Head

TABLE 4.14

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF MENTALLY RETARDED

Developmental Measure	Head Start (N=49)	Non-Head Start (N=129)
Chronological Age		
Total Years	5.0	4.7
Total Months	59.4	55.9
Alpern Boll		
Physical Age (in months)	48.1	33.1
Self Help Age (in months)	53.1	37.4
Social Age (in months)	48.0	37.4
Academic Age (in months)	38.5	29.1
Communication Age (in months)	35.7	26.2
IQ Equivalency	63.2	54.3
California Preschool Social Competency Score (percentile)	18.8	12.3
Severity Level* (1=mild to 4= severe)	1.9	2.1

*See Appendix Table A1 for descriptors of severity level ratings.

Start group. Head Start children are 1 to 1-1/2 years below their chronological age and they show an "IQ" equivalency score within the "educable mentally retarded" range compared with 2 to 2-1/2 year deficits and an "IQ" equivalency score within the "trainable mentally retarded" range for the non-Head Start group. This may indicate not only differences in severity level (which are again rated closely), but also may indicate etiological differences. If, for example, many of the Head Start sample of mentally retarded children are etiologically cultural-familial, then any program offering some stimulation and exposure to learning opportunities could be expected to result in substantial gains. On the other hand, if the non-Head Start sample is comprised of very many mongoloid or "trainable mentally retarded" children, then their rate of growth and development will be significantly lower than the Head Start sample. An inspection of the developmental assessments for these groups suggests that they may well contain large numbers of children for whom the cause, nature, and prognosis of their handicap are dramatically different; efforts to statistically equalize the groups will be necessary.

Summary: The three handicapping conditions of physically handicapped, health or developmentally impaired, and mentally retarded appear to be sampled from two markedly different populations. The two programs (Head Start and non-Head Start) seem to be serving distinctly different populations in this regard. There is evidence of confounding by severity level and etiology effecting expected rates of growth and development. The non-Head Start sample appears to be consistently more severely handicapped than the Head Start sample. This difference in severity is significant enough to consider the populations sampled as non-equivalent. Statistical controls to "equalize" the groups will be required. Also, teacher ratings of severity level show inconsistencies that warrant reconfirming severity level.

Handicapping Conditions with Equivalent Groups

There is good evidence that three handicap conditions (Speech Impaired, Learning Disabled, and Emotionally Disturbed) are distributed representatively in both Head Start and non-Head Start programs with respect to severity and (for the latter two handicaps) by sample size. Tables 4.15 through 4.17 present the mean developmental ages and social maturity scores for these handicap conditions. Both the Learning Disabled and Emotionally Disturbed samples are about the same size for Head Start and non-Head Start programs (n=30 and n=33 respectively for Emotionally Disturbed; and n=27 and n=24 respectively for Learning Disabled). Speech Impaired children are heavily overrepresented in Head Start programs (n=124) compared with non-Head Start (n=53). A review of the three tables shows that chronological ages are very similar. While developmental ages for the specific scales related to the handicap may differ from the chronological age (speech impaired children show about a one year deficit in communication age for example) the

TABLE 4.15

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPED CONDITION OF SPEECH IMPAIRED

Developmental Measure	Head Start (N=124)	Non-Head Start (N=53)
Chronological Age		
Total Years	4.7	4.4
Total Months	56.7	52.2
Alpern Boll		
Physical Age (in months)	61.0	55.3
Self Help Age (in months)	66.3	60.4
Social Age (in months)	60.4	55.5
Academic Age (in months)	49.3	47.3
Communication Age (in months)	45.2	41.4
IQ Equivalency	86.7	88.6
California Preschool Social Competency Score (percentile)	35.3	32.4
Severity Level* (1=mild to 4=severe)	2.1	2.3

*See Appendix Table A1 for descriptors of severity level ratings.

TABLE 4.16

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF SPECIFIC LEARNING DISABILITY

Developmental Measure	Head Start (N=27)	Non-Head Start (N=24)
Chronological Age		
Total Years	5.1	5.2
Total Months	61.2	62.9
Alpern Boll		
Physical Age (in months)	63.9	60.3
Self Help Age (in months)	69.6	63.3
Social Age (in months)	63.5	60.0
Academic Age (in months)	55.1	53.7
Communication Age (in months)	53.8	51.8
IQ Equivalency	89.8	83.8
California Preschool Social Competency Score (percentile)	20.9	36.9
Severity Level* (1=mild to 4=severe)	1.9	1.9

*See Appendix Table A1 for descriptors of severity level ratings.

TABLE 4.17

MEAN DEVELOPMENTAL AGES BY PROGRAM TYPE FOR THE HANDICAPPING CONDITION OF SERIOUSLY EMOTIONALLY DISTURBED

Developmental Measure	Head Start (N=30)	Non-Head Start (N=33)
Chronological Age		
Total Years	4.4	4.8
Total Months	53.0	58.0
Alpern Boll		
Physical Age (in months)	51.6	52.3
Self Help Age (in months)	64.3	56.9
Social Age (in months)	50.5	51.3
Academic Age (in months)	44.5	47.0
Communication Age (in months)	47.6	47.8
IQ Equivalency	84.6	82.6
California Preschool Social Competency Score (percentile)	15.2	13.7
Severity Level* (1=mild to 4=severe)	2.2	2.2

*See Appendix Table A1 for descriptors of severity level ratings.

developmental ages themselves are consistent from group to group (communication ages for the two groups are within 4 months of each other). Social maturity scores are close with the exception of the low scores for Head Start Learning Disabled children. Severity level ratings are similar and consistent with developmental measures.

There is no evidence that the Head Start and non-Head Start samples differ substantially for these handicaps, and there is good evidence to suggest that the groups can be treated as equivalent groups, subject to the considerations discussed previously in the report dealing with sex bias in certain handicapping conditions and the excessive representation of Speech Impaired children in Head Start.

Non-Served

Table 4.18 shows the mean developmental ages for the non-served group as a whole. Because the number of cases for each handicapping condition is too small to enable accurate comparisons, these data are presented for the entire group. Most notable about the distribution of their scores is the close proximity of their scale scores, compared with the other study groups, and the relatively small developmental delay which is evidenced. The largest delay is shown in the Communication Age Scale (13 months) and no other delay exceeds one year.

TABLE 4.18

MEAN DEVELOPMENTAL AGES OF NON-SERVED FOR ALL HANDICAPPING CONDITIONS

Developmental Measure	Non-Served (N=154)
Chronological Age (Total Years)	3.8
(Total months)	46.0
Alpern Boll	
Physical Age (in months)	40.0
Self Help Age (in months)	41.8
Social Age (in months)	39.1
Academic Age (in months)	35.3
Communication Age (in months)	32.8
IQ Equivalency	77.7
California Preschool Social Competency Score (percentile)	NA

Summary and Conclusions. Developmental status as measured by the Alpern-Boll and the California Preschool Social Competency Scale constitute the primary dependent measures for this study. They provide an assessment of the growth and development of the child. To the extent that changes in these measures which occur during the pretest-posttest interim are attributable to the effects of the program the child is enrolled in, then the relative effects of each program type can be ascertained. There is strong evidence, however, that because different populations are served by the programs and because the sample reflects these inequities, certain biases in the measures are present and certain cross group comparisons require methodological verification of some data and statistical corrections to equalize groups:

- Four handicapping conditions are represented with such small sample sizes that no inferential statistical efforts are justified. Because of specific idiosyncracies for each handicapping condition, it is also not feasible to collapse these four categories into a single "low incidence" category:
  - .. Visually Impaired
  - .. Blind
  - .. Hearing Impaired
  - .. Deaf
- Three handicapping conditions demonstrate non-equivalence for groups. This requires comparisons by groups to use statistical corrections in order to equalize these groups by severity level:
  - .. Physically Handicapped
  - .. Health or Developmentally Impaired
  - .. Mentally Retarded
- Three handicapping conditions show good evidence for equivalent groups across program type:
  - .. Speech Impaired
  - .. Learning Disabled
  - .. Emotionally Disturbed
- Severity level judgments by teachers show evidence of inconsistencies and confounding. Some verification or alternative index of severity is necessary.

Because of these differences between groups the analysis plan will consider the following:

1. Analysis efforts for the low incidence handicaps (Visually Impaired, Blind, Hearing Impaired, Deaf) will use simple descriptive statistics coupled with a case study approach. Where possible (large enough sample size, or comprehensive enough data) group comparisons will be made.

2. Handicapping condition must be the level of analysis or statistical controls must be exercised for planned COMPARISONS BETWEEN the three study groups. The groups show evidence of non-equivalence for several handicapping conditions and corrections are required. Such corrections will include:

   A. Using handicap condition as level of analysis

   B. Devising a "standard" for comparison possibilities, such as:

      -- Deviations from expected rate of growth and development (month for month changes projected from baseline development rate) compared with actual rate of growth, as measured by pretest-posttest data;

      -- Standardized change scores.

3. Sex differences exist. To the extent that they reflect expected differences in growth and development rates, change and "progress" measures will be effected. Analysis of the pretest-posttest data must first determine if differences exist, and if so, what the extent and nature of those differences are.

4. Severity level judgments will be confirmed by:

   Using total developmental delay (as measured by the Alpern-Boll) to define relative severity for the study groups.

5. Previous program enrollment or experience does not appear to be a variable which requires special consideration for between group comparisons. For within-group comparisons, however, analysis efforts of contrasting children who have previous enrollments with children with no previous enrollments will be conducted.

ATTITUDES AND CHARACTERISTICS OF THE CHILD'S FAMILY

Many elements of a child's environment contribute to physical, emotional, social, and cognitive growth. Child development theorists differ on the importance of these various elements, but there is general agreement that the characteristics of the family is one of the most important. Characteristics of the family include certain demographic elements (such as the occupational status of family members), as well as the personal values and attitudes which govern family interactions. Information of this nature was collected on each child participating in the study.

The general analysis model (see Chapter I) assumes certain causal relationships among the specified variable groups. Family characteristics are assumed to affect the attitudes and values of the parents and the developmental progress of the child both directly and indirectly. For example, families with certain common characteristics, such as occupational status, may have similar attitudes toward program services. If their attitudes are extremely positive they might be expected to value and support education and to exercise more control on the "progress" of their child. In this way, some family characteristics are expected to contribute to the progress of a child through any given program.

Because of the large number of variables representing family characteristics, it is necessary to determine the most likely variables for inclusion in the analysis model. The criterion for selection of these variables involves two considerations:

- those variables which appear to have the greatest effect on child progress;
- those variables which appear to differentiate between some key groups identified in the study (such as type of program the child is enrolled in or handicapping condition).

Demographic Characteristics of the Family

Five specific demographic variables were identified which could differentially effect child growth and development: family income, occupational status, level of education, and familiarity of the family with handicapping conditions due to the presence of a handicapped sibling and the presence of other children in the family.

Family Income: Table 4.19 shows the distribution of family income by type of program. The only portion of the sample which has a distribution approximating equal percentages in each income category is the non-Head Start group, and more than half of this group (52.9%) makes $10,000 or more. The non-served sample is more heavily represented in the $5,000 to $10,000 range with only one third (33.8%) above $10,000. As expected, the Head Start sample is comprised heavily of families making less than $5,000 (44.5%). These three groups are substantially different with respect to income. Income also provides an indicator for the "quality of home environment" but if income in any way reflects the ability of the parents to deal with and remediate a handicapping condition in a child, then consideration of this variable in the analysis is important.

TABLE 4.19

DISTRIBUTION OF PROGRAM TYPE BY LEVEL OF FAMILY INCOME

LEVEL OF FAMILY INCOME	Program Type		
	Head Start % of Column	Non-Head Start % of Column	Non-served % of Column
Total	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
No Answer	2.3 (N=10)	0.8 (N=3)	0.6 (N=1)
Under $5,000	44.5 (N=191)	20.7 (N=73)	28.6 (N=44)
$5,000 to $10,000	35.2 (N=151)	25.5 (N=90)	37.0 (N=52)
$10,000 to $15,000	11.9 (N=51)	30.0 (N=106)	20.8 (N=32)
Over $15,000	6.1 (N=26)	22.9 (N=81)	13.0 (N=20)

Occupational Status: Table 4.20 presents the occupation status[1] ratings of the respondents (higher ratings reflect occupations with higher socioeconomic status). The Duncan Socioeconomic Index classifies occupations into ratings which reflect both the social status of the occupation as well as the earned income. For purposes of clarity of presentation the classification ratings, ranging from 01 (housewife) to 96 (doctors) are divided into decile groups (group 1 ranges from 1 to 10, group 2 ranges from 11 to 20, etc.). The figures show that the preimary respondent in all three sample groups is a "housewife" and that the majority of respondents are in the lower two decile groups: 82.6 percent for Head Start, 68.7 percent for non-Head Start, and 76.6 percent for non-served. The Head Start sample is predominately represented by low occupational status respondents. This is better illustrated in Figure 4.1 which shows the Head Start sample with the highest frequency in the lowest decile groups. In contrast, the non-Head Start sample has the lowest frequency in these groups indicating that fewer of them are in low status occupations. After the third decile the groups reverse and, as expected, the frequency of the Head Start sample for the higher occupational groups drops to the lowest relative frequency. This reflects a sampling bias which was expected, given the responsibilities of Head Start programs to provide services almost exclusively to poverty level populations.

Table 4.21 and Figure 4.2 present similar occupational status information for respondents' spouses. Of special interest in the fairly high percentage of "unspecified" indicating no spouse and probably reflecting the number of single parent families. The non-Head Start sample has dramatically fewer single parent families (20.7%) than either Head Start (34.3%) or the non-served sample (29.9%) both of which are close to the national average (estimated to be about 33%).

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[1] Duncan Socio-Economic Index by: Peter M. Blau and Otis Dudley Duncan, The American Occupational Structure. New York: John Wiley & Sons, 1967, Table 4.1, pp. 122-123.

TABLE 4.20: DISTRIBUTION OF RESPONDENT OCCUPATIONAL STATUS BY PROGRAM TYPE

Occupational Status of Respondent (Duncan Socio-Economic Index)*		Program Type		
		Head Start % of Column	Non-Head Start % of Column	Non-Served % of Column
Total		100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Housewife (01)		66.7 (N=286)	58.6 (N=200)	63.6 (N=98)
Decile Group Range	Group			
02 to 10	(1)	6.0 (N=26)	2.4 (N=8)	3.7 (N=6)
11 to 20	(2)	9.9 (N=42)	7.7 (N=27)	9.4 (N=15)
21 to 30	(3)	4.0 (N=17)	1.5 (N=5)	2.4 (N=4)
31 to 40	(4)	2.1 (N=9)	2.3 (N=8)	2.5 (N=4)
41 to 50	(5)	5.1 (N=22)	8.7 (N=31)	6.9 (N=11)
51 to 60	(6)	1.0 (N=4)	4.5 (N=16)	1.3 (N=2)
61 to 70	(7)	1.6 (N=7)	5.9 (N=21)	5.0 (N=10)
71 to 80	(8)	3.2 (N=14)	4.6 (N=16)	1.9 (N=3)
81 to 90	(9)	*	0.3 (N=1)	1.2 (N=5)
91 to 100	(10)	*	*	*
Unspecified		0.5 (N=2)	3.7 (N=13)	0.6 (N=1)

*Duncan Socio-Economic Index (Appendix IV).

TABLE 4.21: DISTRIBUTION OF OCCUPATION STATUS RESPONDENTS' SPOUSE BY PROGRAM TYPE

Occupational Status of Respondents' Spouse (Duncan Socio-Economic Index)*		Program Type		
		Head Start % of Column	Non-Head Start % of Column	Non-Served % of Column
Total		100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Housewife (01)		1.6 (N=7)	5.7 (N=20)	0.6 (N=1)
Decile Group Range	Group			
02 to 10	(1)	18.0 (N=77)	7.5 (N=27)	12.9 (N=20)
11 to 20	(2)	17.0 (N=73)	17.5 (N=62)	16.7 (N=26)
21 to 30	(3)	6.9 (N=29)	9.9 (N=35)	4.4 (N=7)
31 to 40	(4)	10.5 (N=45)	11.0 (N=39)	8.9 (N=14)
41 to 50	(5)	5.6 (N=24)	9.6 (N=34)	11.4 (N=18)
51 to 60	(6)	2.2 (N=10	3.2 (N=11)	5.8 (N=9)
61 to 70	(7)	1.4 (N=6)	5.0 (N=17)	2.5 (N=4)
71 to 80	(8)	1.8 (N=8)	5.7 (N=20)	3.2 (N=5)
81 to 90	(9)	0.7 (N=3)	1.7 (N=6)	2.5 (N=4)
91 to 100	(10)	*	2.5	*
Unspecified		34.3 (N=147)	20.7 (N=73)	29.9 (N=46)

*Duncan Socio-Economic Index (Appendix IV).

Substantial differences between the study groups on the variable of occupational status suggests that the samples may be drawn from different populations. It is possible that certain elements of child growth and development could, in part, be based on these differences. Ocupational status will require consideration in the analysis model.

Education Level: Level of respondent education is shown in Table 4.22. Half of the Head Start respondents (49.4%) have less than a high school degree while only one fourth (23.8%) of the non-Head Start respondents and only one third (36.4%) of the non-served have not at least graduated from high school. The non-Head Start group is the best educated with one third (33.4%) having "some college" or above. This seems to confirm the group differences identified by the variables of income and occupational status, all of which contribute to defining the "quality of the home environment." If more highly educated families are better able to cope with a handicapped child, either through greater familiarity with the institution of education or because of more knowledge about handicaps and education, then differences in child progress may be related to this variable. Educational level should be considered in the analysis model.

TABLE 4.22

DISTRIBUTION OF PROGRAM TYPE BY LEVEL OF PARENT EDUCATION

Level of Parent Education	Program Type Head Start % of Column	 Non-Head Start % of Column	 Non-served % of Column
Total	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Less Than High School	49.4 (N=212)	23.8 (N=84)	36.4 (N=56)
High School Graduate	33.6 (N=144)	42.8 (N=151)	41.6 (N=64)
Some College	14.2 (N=61)	22.9 (N=81)	16.9 (N=26)
College Graduate	1.9 (N=8)	5.4 (N=19)	3.9 (N=6)
Postgraduate Study	0.9 (N=4)	5.1 (N=18)	1.3 (N=2)

Presence of Handicapped Siblings: If a family has other children or other handicapped children, then presumably the family has more experience in child development and with the problems associated with a handicapped child. It seems reasonable therefore to consider these as important variables which might affect the child's progress on the dependent measures. Table 4.23 presents the distribution of handicapped siblings by program type. The three study groups are fairly close in this respect with the exception that the non-Head Start group shows about 10 percent fewer handicapped siblings than either Head Start or the non-served group. This is a small difference and is largely offset by the large percent of children with no other siblings at all or with no handicapped siblings. Table 4.24 shows that 83.7 percent of Head Start children in the study have siblings while 78.8 percent of the non-Head Start children and 81.2 percent of the non-served do. Developmental differences, if any, attributable to the 10 percent fewer handicapped siblings in the non-Head Start sample, would be difficult to detect. Without better evidence that the variable of other children in the family is related to changes in growth and development, as measured, these variables should probably not be considered for inclusion in the analysis effort.

TABLE 4.23

DISTRIBUTION OF PROGRAM TYPE BY SIBLINGS WITH HANDICAPS

Siblings	Program Type		
	Head Start % of Column	Non-Head Start % of Column	Non-served % of Column
No siblings	16.3 (N=70)	21.2 (N=75)	18.8 (N=29)
Non-Handicapped siblings	57.6 (N=247)	63.5 (N=224)	55.8 (N=86)
Handicapped siblings	26.1 (N=112)	15.3 (N=54)	25.3 (N=39)
TOTAL	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)

TABLE 4.24

PRESENCE OF OTHER CHILDREN IN THE FAMILY BY PROGRAM TYPE

Presence of Other Children in the Family With the Handicapped Child	Program Type Head Start % of Column	 non-Head Start % of Column	 Non-Served % of Column
Total	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
Other children present (not necessarily siblings)	83.7 (N=359)	78.8 (N=278)	81.2 (N=125)
Handicapped child is the only child in the family	16.3 (N=70)	21.2 (N=75)	18.8 (N=29)

Summary of Demographic Variables: All of the specified demographic variables, except "the presence of other siblings," appear to show identifiable differences between groups. Since the purpose of this report is to reduce the large number of independent variables, it is necessary to further distinguish between these variables and identify only the key variables which differentiate the groups to the maximum.

To achieve this goal of selecting from this group only the most important demographic variables relating to program type, a discriminate analysis was performed. A discriminate analysis uses an individual's score on several variables to predict something about that individual based on the scores achieved by other prople on those same variables. A common use of the discriminate analysis, for example, is deciding college admissions based on predictions of how well a given individual will perform. These predictions of college performance are usually based on such variables as achievement tests, rank in high school, grade point average, participation in extra curricular activities, etc. The purpose of using a discriminate analysis with these demographic variables, however, is not to develop a practical prediction equation. What is of interest and utility is whether or not any (or all) of the variables under consideration make a substantial enough contribution towards predicting the program the child is enrolled in to justify a decision that the identified variable is not equally distributed between the two groups (Head Start and non-Head Start). Should any variable be included in the discriminate function (prediction equation) at a statistical level of significance greater than .001 (probable error is less than 1 time out of 1,000), that variable will be considered to be significantly different between the two study groups.

Information on the discriminate analysis for all demographic characteristics of the family is presented in Table 4.25. A discriminate function using the variables family income, education level of spouse and respondent, and the number of other children in the family, was computed. The prediction equation correctly predicts membership in program type (Head Start vs non-Head Start programs) with 68 percent[1/] accuracy. Two factors of special interest should be noted:

1. Wilks' Lambda is only reduced to .8347;
2. The squared canonical correlation (.407) of .1656, indicates only 17 percent of the variation in assignment to program type is explained by the discriminate function.

As Wilks' Lambda is reduced from unity (1.0) it is a measure of the discriminating power of the function--the smaller Lambda is, the more powerful the function. The Lambda resulting from the function is .8347 and shows relatively low power. The squared canonical correlation indicates that only 17 percent of the variance is explained by this function leaving 83 percent unaccounted for. The purpose of computing the discriminate analysis, however, is not to develop a formula for predicting membership in program type. Rather the purpose is to identify those variables within the demographic characteristic of the family which should be included in the analysis efforts because of their ability to distinguish respondents by program type.

[1/] Computed classification accuracy of 68.2 percent was corrected for unequal n per classification group (as recommended by Morrison, 1969).

TABLE 4.25

DISCRIMINATE FUNCTION FOR DEMOGRAPHIC CHARACTERISTICS OF THE FAMILY

Variables	F Statistic	Wilks' LAMBDA	Significance	Standardized Discriminate Coefficients	Significance of Change by Adding This Variable
Family Income	121.137	.8655	<.0001	-.6239	<.000
Education Level of Spouse	19.041	.8449	<.0001	-3.264	<.000
Education Level of Respondent	6.909	.8374	<.0001	-.2165	= .004
Number of other children	2.561	.8347	<.0001	+.1331	= .080
Occupational Status-Respondent	Insufficient effect for inclusion				
Occupational Status-Spouse	Insufficient effect for inclusion				
Presence of Handicapped Children	Insufficient effect for inclusion				

Wilks' LAMBDA	.8347
Chi squared	140.540
Significance	<.0001
Canonical Correlation	.407

$r^2 = .1656$

Actual Membership	Predicted Membership Non-Head Start % of Row	 Head Start % of Row
Non Head Start	54.1 (N=191)	45.9 (N=162)
Head Start	20.3 (N=87)	79.7 (N=342)

Percent correctly classified (corrected for unequal group size) = 68.2%

For final data analysis purposes, at least two of the four identified variables should be retained because of their ability to show different and expected effects for each program.

Both Family Income and Education Level of Spouse contribute significant change effects (.000 level of significance) to the discriminate function and should therefore be specifically included for analysis purposes. The purpose of the discriminate function in this analysis is to reduce the number of variables under consideration and to identify differential effects which may obscure effects otherwise attributable to differences in programs, the pretest-posttest analysis must include only those variables necessary as covariates (or otherwise statistically control for their effects). It may be desirable to retain the other two variables, Education

Level of Respondent and Number of Other Children for preliminary analysis since the change effects by their addition are small but significant (.01). Additionally, as shown in Table 4.25, these two variables do not substantially reduce Wilks' Lambda and so do not markedly enhance the discriminating power of the function.

Parent and Child Interaction

The High Scope Home Environment Scale is designed to assess the amount and quality of interaction between the child and a primary adult in the family, usually the mother. In addition, an increase in parent-child interaction is frequently cited as an educational goal of many preschool programs. Since gains on this measure could also be considered as treatment effects with delayed or time-lagged effects on child growth and development, this measure may be important as a pretest-posttest measure (using gain scores for analysis). Mean scores for each study group on this measure are presented here:

	Head Start (N=429)	Non-Head Start (N=353)	Non-Served (N=154)
Mean Score	33.5	31.9	29.7
Standard Deviation	7.36	8.32	8.26

The higher mean score for the Head Start sample indicates more parent-child interaction, a factor which could contribute substantially to child progress.

Attitude Towards Mainstreaming

Parents who had handicapped children enrolled in predominantly mainstream programs, were asked to complete a nine-item questionnaire assessing their relative attitudes towards the mainstreaming concept. The validity and sensitivity of this scale has been previously discussed (Chapter 3). Table 4.26 presents the mean scores on this questionnaire by handicapping condition and program type. Note that only 62 of the non-Head Start children are in mainstreamed programs while all but seven of the Head Start children are mainstreamed.

TABLE 4.26

MEAN SCORES ON ATTITUDE TOWARDS MAINSTREAMING BY HANDICAPPING CONDITION AND PROGRAM TYPE: FOR MAINSTREAMED CHILDREN ONLY

Handicapping Condition	Program Type	
	Head Start Mean Score	Non-Head Start Mean Score
All Handicaps	22.77 (N=422)**	21.94 (N=62)**
Visually Impaired	23.21 (N=19)	*
Blind	22.00 (N=1)	23.00 (N=1)
Hearing Impaired	22.00 (N=19)	*
Deaf	22.60 (N=5)	*
Physically Handicapped	23.27 (N=80)	22.15 (N=13)
Speech Impaired	22.69 (N=123)	21.53 (N=19)
Health of Developmentally Impaired	22.92 (N=73)	23.00 (N=3)
Mental Retardation	22.39 (N=46)	20.70 (N=10)
Specific Learning Disabled	22.08 (N=26)	23.67 (N=6)
Seriously Emotionally Disturbed	22.10 (N=30)	22.20 (N=10)

*No mainstreamed children from the non-Head Start programs are in this handicap category.

**Head Start N=422; this is 98.4 percent of Head Start sample. Non-Head Start N=62; this is 17.6 percent of non-Head Start sample.

The nine item questionnaire has three response choices for each item (1 = negative, 2 = neutral, 3 = positive) allowing for a range of scores from 3 (most negative attitude toward mainstreaming) to 27 (most positive attitude toward mainstreaming). A score of 18 would be average and would indicate an overall "neutral" attitude. Generally, the Head Start respondents have a slightly more positive attitude towards mainstreaming although both groups show consistently positive attitudes. The small sample size in the non-Head

Start group makes group comparisons difficult, but the tendency for differences between means to be small suggests that there are no substantive difference between groups for the mainstreamed sample. Since improved attitude towards the idea of mainstreaming handicapped children can be considered as a possible treatment effect with delayed or time-lagged effects on child development, this measure should be retained both as a potential covariate and to assess actual change during the pretest-posttest interim.

Attitudes and Values Concerning Education

Twelve attitude measures were administered to parents to assess specific educational attitudes and values:

1. Extent of teacher contact;
2. How important the parent feels a special program is;
3. Is the child currently in the best available program;
4. Does the parent feel the child will benefit from the current program;
5. The parent is powerless to affect the educational program;
6. The parent appreciates the teacher's efforts;
7. Belief that parental authority is absolute;
8. Belief that children are basically good;
9. Belief that children learn actively;
10. Belief that children should all be treated uniformly;
11. Belief that the teacher's authority is absolute;
12. Rejection of maternal role.

Since the parents' attitude in any of these dimensions could have direct effects on the immediate performance and indirect effects on long-term development of the handicapped child, any differences between sample groups could obscure effects otherwise attributable to the program. If the samples are randomly selected and if respondents are all randomly assigned to groups, then group differences should not exist (or differences that do exist would be due to sample variations). However, certain selection and subsample biases are already evident and have been discussed; therefore some group differences might be expected.

Table 4.27 presents the group means for each specified attitude. Noticeable differences can be detected between groups for scales 2, 5, 7, 10, 11, and 12. Statistical tests of significance for differences between group means are virtually meaningless with large sample sizes such as are present here. Such statistical tests only verify the probability of differences occurring at random and for large samples very minute differences will be significant. A more useful approach is to conduct a discriminate analysis to predict membership in program type using these twelve measures.

TABLE 4.27

GROUP MEANS FOR PARENT ATTITUDES AND VALUES ABOUT EDUCATION BY PROGRAM TYPE

Scale No.	Attitude/Value *	Program Type Head Start Mean Score	 Non-Head Start Mean Score	Minimum Possible Score	Maximum Possible Score
		N=429	N=353		
1	Teacher contact	2.03	1.92	1 (a lot)	4 (a little)
2	Importance of special program	1.83	1.41	1 (very important)	3 (very unimportant)
3	Child in best program	1.08	1.07	1 (yes)	2 (no)
4	Benefit from current program	1.14	1.15	1 (yes)	2 (no)
5	Parent powerlessness	8.29	7.84	3 (disagree)	15 (agree)
6	Appreciation of teacher	14.30	14.54	3 (disagree)	15 (agree)
7	Parental authority is absolute	15.48	13.38	4 (disagree)	20 (agree)
8	Children basically good	12.62	12.15	3 (disagree)	15 (agree)
9	Children learn actively	12.66	12.56	2 (disagree)	15 (agree)
10	Treat children uniformly	21.59	18.85	5 (disagree)	25 (agree)
11	Teacher authority absolute	16.81	14.89	4 (disagree)	20 (agree)
12	Reject maternal role	10.54	9.97	5 (disagree)	25 (agree

*High scores reflect more positive attitudes; low scores reflect more negative attitudes. Because each scale has a different number of items, and therefore different high-low ranges, comparisons can only be made relative to one scale at a time. Scores on one scale cannot be compared to scores on another scale.

Table 4.28 presents the results of the discriminate analysis for these measures. Seven of the 12 scales make a significant contribution to a discriminate function although the canonical correlation of .368 indicates that only 13.5 percent of the variance between group assignments is explained by the function. The percent correctly classified by the prediction function is 66.4 percent (corrected for unequal size groups). The obtained Wilks' Lambda (.8643), a measure of the discriminating power of the function, is statistically significant (Chi squared = 113.284, significance <.001) although of very low power. The purpose of the discriminate analysis, however, is not to create accurate prediction estimates. Instead, the goal is to identify a few variables which show evidence of differential effects for the sampled groups and for which consideration of statistical controls in the final data analysis effort will assist in explaining as much variance between and within programs as possible.

TABLE 4.28

DISCRIMINATE FUNCTION FOR ATTITUDES/VALUES OF THE PARENT RESPONDENT

Variables	F Statistic	Wilks" Lambda	Significance	Standardized Discriminate Coefficients	Significance of Change by Adding This Variable
Scale No. 10	66.128	.9218	<.001	-.5299	<.000
Scale No. 2	22.487	.8959	<.001	-.4484	<.000
Scale No. 11	15.676	.8783	<.001	-.2824	<.000
Scale No. 6	5.535	.8721	<.001	+.2043	=.012
Scale No. 3	2.818	.8689	<.001	-.1654	=.072
Scale No. 7	2.814	.8658	<.001	-.2159	=.071
Scale No. 12	1.343	.8643	<.001	-.1062	=.212
All other scales	Insufficient effect for inclusion				

Wilks' Lambda = 0.8643
Chi Squared = 113.284
Significance = <.0001

Canonical Correlation = .368

r^2 = .1354 or 13.5% variance explained

Actual Membership	Predicted Membership Non-Head Start % of Row	 Head Start % of Row
Non Head Start	53.3 (N=188)	46.7 (N=165)
Head Start	22.8 (N=98)	77.2 (N=331)

Percent correctly classified (corrected for unequal group size) = 66.4%

Only three scales (Scale 10, 2 and 11) of the seven scales included in the discriminate function (Table 4.28) show substantial effects in reducing Wilks' Lambda. The addition of each of these three scales to the function enhances the predictive accuracy by significance level greater than .001. Subsequent scales, as they are added to the function, add effects which achieve significance levels less than .001. Head Start parents consistently show more positive attitudes on these three scales (treating children uniformly, importance of special programs, and belief that teacher authority is absolute) compared with non-Head Start parents. Since the purpose of the function is to identify the most important variables contributing to differential group effects, only scales 10, 2, and 11 will be considered for use as covariates in the analysis. The utility of any of the scores in gain score analysis cannot be determined until pretest-posttest changes can be examined.

Summary and Recommendations

For this sample of Head Start and non-Head Start respondents there are certain key attitudes and characteristics of the family that distinguish between the groups or which show strong evidence of possible pretest-posttest differences. Since these differences may have effects that are associated with, or similar to, the effects that are attributable to the program itself, it is important to examine any of these variables which show evidence of differential effects. In order to describe as fully as possible the effects of each program, it is first necessary to control for the effects of selection bias which are present in the populations served. There are two specific variable types which will require analysis considerations: variables with potentially time-lagged effects, and variables with documented differential effects.

- Variables with potentially lagged effects: the amount of parent and child interaction and the parents' attitude toward the mainstreaming concept have both been identified as secondary treatment goals by many programs. The selection of these goals for treatment is based on the assumption that both primary and secondary effects on the chid's growth and development are effected through modifying the amount and/or quality of parent and child interaction and through enhancing the attitudinal support of the parents for mainstreamed situations. Minor, but nonsignificant, differences between the groups were found on these measures. While no statistical controls for the effects of these measures are necessary, they will be treated as secondary dependent variables for purposes of estimating potential delayed treatment effects.

In addition, three attitude/value measures (belief that all children should be treated uniformly, teachers' authority is absolute, and importance of a special program) showed significant evidence of differential effects for each program. While the effects of these variables are expected to be time-lagged, the pretest differences will require statistical corrections in order to use these as secondary dependent measures which estimate potential treatment effects.

- Variables with documented differential effects: four demographic characteristics (family income, education level of spouse and respondent, and number of other children) showed significant evidence of effects that are different for each type of program. In order for these effects not to be misinterpreted as "program effects" and in order to prevent the subsequent obscuring of "program effects," these four variables will undergo preliminary analyses to determine which should be statistically controlled for in the final data analysis effort for between-group comparisons.

ATTITUDES AND CHARACTERISTICS OF THE TEACHERS

Information on the demographic characteristics of teachers, on their attitudes and values in several areas and on the size of class enrollments, were collected. The purpose of assessing teachers in these areas is to determine if differences exist between programs that must be controlled for or that would otherwise affect analysis efforts, and to identify key variables which might contribute to developmental progress of the child. Four kinds of data were collected: demographic characteristics (education, salary, certification, and previous experience with the handicapped), values toward education and the center program (perceptions of organizational support and education values), attitude towards the concept of mainstreaming handicapped children, and class enrollment.

Demographic Characteristics

Five specific variables were identified as key demographic characteristics of teaching staff which might contribute to differences by program type or to the developmental progress of handicapped children.

Education level. Table 4.29 presents the educational levels of teachers for the sampled handicapped population. Dramatic differences are evident by program type. Most of the non-Head Start sample of teachers are college graduates (81.4%) compared with only about one third of the Head Start sample (38.9%). The modal educational level (most frequent) for Head Start teachers is "some college," for non-Head Start teachers it is "post graduate study." Only 3.4 percent of the non-Head Start sample have a high school degree as their highest level of educational attainment, compared with 10.8 percent in Head Start.

TABLE 4.29

DISTRIBUTION OF PROGRAM TYPE BY EDUCATION LEVEL OF TEACHER

Education Level of Teacher	Program Type	
	Head Start % of Column	Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
Some High School	3.3 (N=14)	*
High school Graduate	7.5 (N=32)	3.4 (N=12)
Some College	40.3 (N=173)	13.3 (N=47)
Associate Degree	10.0 (N=43)	2.8 (N=10)
Bachelor's Degree	21.7 (N=93)	31.4 (N=111)
Postgraduate Study	17.2 (N=74)	49.0 (N=173)

This dramatic difference in level of education is coupled with additional differences in specialization areas. Table 4.30 shows that almost half of the non-Head Start teachers (44.2%) have degrees in special education, compared with only 5.1 percent of Head Start teachers. The most common degree area in Head Start is early childhood education.

TABLE 4.30
DISTRIBUTION OF PROGRAM TYPE AND SPECIALIZATION AREAS FOR COLLEGE GRADUATES

Specialization Area	Program Type	
	Head Start % of Column	Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
NO DEGREE	49.4 (N=212)	13.3 (N=47)
Special Education	5.1 (N=22)	44.2 (N=156)
Early Childhood Education	26.1 (N=112)	18.1 (N=64)
Other Degree Area	13.5 (N=58)	22.9 (N=81)
Not Specified	5.8 (N=25)	1.4 (N=5)

This educational level and specialization information indicates that non-Head Start programs tend to employ college educated special education personnel, while Head Start programs tend to employ non-college degreed teachers. While this indicated significant differences in the type of teaching staff, it may also reflect even more important differences in the programs themselves. This is discussed in greater detail in the section on PROGRAM CHARACTERISTICS.

Certification. Table 4.31 shows programs with State certified teachers. One fourth as many Head Start teachers (13.8%) are certified by their State education agency as are non-Head Start teachers (56.1%). Again, this difference may reflect more important and overriding program differences, and is discussed in more detail later.

TABLE 4.31

DISTRIBUTION OF PROGRAM TYPE BY TEACHER CERTIFICATION

Teacher Certified by State For Teaching Handicapped Children	Program Type Head Start % of Column	 Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
Yes	13.8 (N=59)	56.1 (N=198)
No	86.2 (N=370)	43.9 (N=155)

Experience with preschool handicapped. Teachers in both types of programs appear to have essentially similar backgrounds with preschool handicapped children. This is shown in Table 4.32. Only 13.9 percent of Head Start teachers and 9.4 percent of non-Head Start teachers have had no previous experience with handicapped preschoolers prior to the current program they are teaching in. While the non-Head Start sample has had slightly more volunteer experience (36.8% compared with 27.0%) the amount of teaching and classroom aide experience is very similar. Although the types of experience and contact does not appear to be different for the two programs, there are small differences in the overall amount of experience. Table 4.33 shows the years of experience working with handicapped children. Head Start programs tend to have fewer teachers with less than one year experience (9.8% compared with 17.3% for non-Head Start teachers) and more teachers with five years or more experience (33.3% compared with 22.9%). In other words, the element of teaching experience with the handicapped preschool child tends to favor Head Start. This may reflect age differences of teachers, rates of personnel turnover, or other differences related to characteristics of the programs themselves.

TABLE 4.32

DISTRIBUTION OF PROGRAM TYPE BY TYPE OF PRIOR EXPERIENCE WITH HANDICAPPED CHILDREN FOR TEACHERS

Type of Prior Experience With Handicapped Children	Program Type	
	Head Start % of Sample* N=429	Non-Head Start % of Sample* N=353
Total	100.0 (N=429)	100.0 (N=353)
No previous experience	13.9 (N=60)	9.4 (N=33)
Volunteer experience	27.0 (N=116)	36.8 (N=130)
Teaching	61.8 (N=265)	58.6 (N=207)
Aide	21.5 (N=92)	19.8 (N=70)
Parent	14.5 (N=62)	7.1 (N=25)
Sibling	3.9 (N=17)	4.5 (N=16)
Other	17.5 (N=75)	41.1 (N=145)

*Respondents could have experience in more than one category, so totals do not sum to sample N.

TABLE 4.33

AMOUNT OF PREVIOUS EXPERIENCE WITH PRESCHOOL HANDICAPPED CHILDREN BY PROGRAM TYPE

Amount of Experience	Program Type	
	Head Start % of Column	Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
Less than 1 year	9.8 (N=42)	17.3 (N=61)
1 to 2 years	23.8 (N=102	26.6 (N=94)
3 to 5 years	33.1 (N=142)	33.1 (N=117)
More than 5 years	33.3 (N=143)	22.9 (N=81)

Salary. Teacher salary is shown in Table 4.34. As might be expected from differences in the education levels, there are pronounced differences in salary levels for Head Start and non-Head Start programs. Very few Head Start teachers (4.9%) receive a salary in excess of $12,000 while 17 percent of non-Head Start teachers receive salaries at that level. Many Head Start teachers (40.6%) receive less than $5,000 while only 7.1 percent of non-Head Start teachers are paid that amount. The difference is best illustrated by the fact that 70 percent of Head Start teachers receive less than $7,000 while 73.7 percent of non-Head Start teachers receive more than $7,000.

TABLE 4.34

DISTRIBUTION OF PROGRAM TYPE BY TEACHER SALARY

Teacher Salary	Program Type Head Start % of Column	 Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
Unspecified	0.5 (N=2)	1.4 (N=5)
$ 5,000 or less	40.6 (N=174)	7.1 (N=25)
$ 5,000 to $ 7,000	30.8 (N=132)	17.8 (N=63)
$ 7,000 to $10,000	16.8 (N=72)	34.3 (N=121)
$10,000 to $12,000	6.5 (N=28)	22.4 (N=79)
Over $12,000	4.9 (N=21)	17.0 (N=60)

Class enrollment

Table 4.35 presents average class enrollments for each program. The special education emphases which were discussed earlier in educational specialization areas, are again reflected in the enrollment figures. Head Start children are predominately non-handicapped

TABLE 4.35

MEAN ENROLLMENTS FOR HANDICAPPED AND NON-HANDICAPPED CHILDREN BY PROGRAM TYPE

Children	Program Type Head Start Mean per Class	 Non-Head Start Mean per Class
All children per class	21.1	13.1
Non-handicapped per class	17.4	2.3
Handicapped only per class	3.7	10.8

with an average of only 3.7 handicapped children per class. On the other hand, the non-Head Start children are predominately handicapped. They average 10.8 handicapped children in each class of 13 children. The non-Head Start classrooms tend to be staffed by special education teachers (who are incidentally considerably better paid than Head Start teachers) and tend to deal almost exclusively with handicapped children.

Since initial review of these six demographic variables indicates that they all show strong potential for differentiating between the two program types, a discriminate analysis was computed to determine the key variables. These data are presented in Table 4.36. All of the prespecified variables show statistical significance as predictors for the discriminate function, which is relatively powerful (Wilks' Lambda = 0.4314; Chi square = 659.485, significance $<$.000) and explains 57.3 percent of the variance (cannonical correlation = .757; r^2 = .573). Almost 90 percent of the teachers are correctly classified by program type using this discriminate function. This extremely high rate of classification indicates that each of the specified variables have substantially different effects for each program.

Because it is necessary, for practical purposes, to reduce the number of variables considered for inclusion in the final analysis effort, one variable may be considered for elimination: certification of the teacher. Table 4.36 shows that the first three variables (handicapped enrollment, total enrollment and teacher salary) each

TABLE 4.36

DISCRIMINATE FUNCTION TO PREDICT TYPE OF PROGRAM MEMBERSHIP FOR DEMOGRAPHIC CHARACTERISTICS OF TEACHERS

Variables	F Statistic	Wilks' Lambda	Significance	Standardized Discriminate Coefficients	Significance of Change by Adding This Variable
Handicapped Enrollment	312.116	.7142	<.001	+ .5956	<.000
Total Enrollment	323.188	.5048	<.001	- .5508	<.000
Teacher Salary	104.417	.4451	<.001	+ .2616	<.000
Teacher Educational Level	8.449	.4403	<.001	+ .0736	<.000
Experience with Preschool Handicapped Children	6.342	.4367	<.001	- .0761	<.000
Certified	4.163	.4314	<.001	- .0675	=.002

Wilks' Lambda = 0.4314
Chi Squared = 659.485
Significance = <.000

Canonical Correlation = .757
r^2 = .5730 or 57.3% variance explained

Actual Membership	Predicted Membership	
	Non-Head Start % of Row	Head Start % of Row
Non-Head Start	87.0 (N=307)	13.0 (N=46)
Head Start	7.7 (N=33)	92.3 (N=396)

Percent correctly classified (corrected for unequal group size) = 89.9%.

substantially reduce Wilks' Lambda (the measure of power for the discriminate function). Although the other three variables (education level, experience, and certification) all contribute "change" in the function which is statistically significant, they do not greatly reduce Wilks' Lambda either individually or as a group. Since the purpose of calculating the discriminate function is to identify those few key variables which differentiate between groups (rather than creating a prediction equation), one of these latter three variables should be discounted from the final analysis effort: certification of teacher. Inclusion of the first three variables accounts for almost all available variance, and two of the latter three variables add slightly to the power of the function.

Attitudes and Values of Teachers

Three measures of attitudes and values toward education and toward the specific program the teacher works in were used. Two measures were obtained from the two scales contained in the Schaefer Teacher Inventory. The "General" scale assesses attitudes towards parents, conferences, and roles of the parents and home environment in the child's learning. The "Education" scale assesses attitudes toward authority, learning styles and discipline. The third measure is the Schaefer Teacher Perception of Center Environment which assesses the teacher's perceptions of organizational support, control, and climate. Differences between programs have already been detailed in terms of selection biases for the population served, family characteristics, and certain demographic characterizations of teachers. To the extent that teacher attitudes, which can be expected to affect developmental progress of the child, differ with respect to program type; then the true effects of the program are additionally obscured by the attitudinal variables of teachers. The following review is intended to identify those attitudes which differ by type of program.

Schaefer Teacher Inventory

Table 4.37 shows the mean scores of each of the Schaefer Teacher Inventory scales by program type. The largest mean difference occurs on the second scale of the "general" section (importance of home learning; mean difference = .75) and on the third and fourth scales of the "Education" section (children learn passively and children should be treated uniformly; mean differences 2.45 and 3.46 respectively). These differences reflect significant attitudinal variation by program type. Head Start teachers consistently show more positive attitudes in these areas than non-Head Start teachers.

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TABLE 4.37

MEAN SCORES ON SCHAEFER TEACHER INVENTORY BY PROGRAM TYPE

Schaefer Teacher Inventory Scales**	Program Type		Minimum Possible Score	Maximum Possible Score
	Head Start Mean Score	Non-Head Start Mean Score		
GENERAL				
Uselessness of p-t conferences	4.39	4.19	3 (disagree)	15 (agree)
Importance of home learning	11.88	11.13	3 (disagree)	15 (agree)
Skills and comfort with parents	13.30	12.89	3 (disagree)	15 (agree)
Parents' appreciation of teachers	12.89	12.29	3 (disagree)	15 (agree)
Difficulty with parents of children with problems	6.05	6.83	3 (disagree)	15 (agree)
Reluctance to teacher parents	5.03	5.16	3 (disagree)	15 (agree)
Discomfort with parents	5.28	5.71	3 (disagree)	15 (agree)
EDUCATION				
Parental authority is absolute	8.28	7.00	3 (disagree)	15 (agree)
Children basically good	12.56	11.42	3 (disagree)	15 (agree)
Children learn passively	*10.81	8.36	3 (disagree)	15 (agree)
Children should be treated uniformly	*17.53	14.07	5 (disagree)	25 (agree)
Irritability with children	8.86	8.92	3 (disagree)	15 (agree)
Teacher's authority is absolute	11.45	10.11	4 (disagree)	30 (agree)

*Scales with the largest mean differences.

**High scores reflect more positive attitudes; low scores reflect more negative attitudes. Because some scales have a different number of items, and therefore different high-low ranges, scores on one scale cannot always be compared to scores on another scale.

Schaefer Teacher Perception of Center Environment

The mean scores for the three scales of this measure are presented in Table 4.38. The participation-non-participation scale shows the largest mean difference (3.99) with Head Start teachers indicating a higher feeling of participation in center activities. This would seem to be an important morale area and differences by program type could be important to control for.

A separate discriminate function was calculated on these attitude scales to verify indications that certain attitude variables were differentially represented in each program. These data are presented in Table 4.39. A total of 11 variables contributed significant effects to the discriminate function which only reduced

TABLE 4.38

MEAN SCORES FOR THE SCHAEFER TEACHER PERCEPTION OF CENTER ENVIRONMENT BY PROGRAM TYPE

Schaefer Teacher Perception of Center Environment**	Program Type Head Start Mean Scores	 Non-Head Start Mean Scores
Internal Support-nonsupport	54.32	52.28
Participation-nonparticipation*	35.92	31.93
Control-Compliance	43.79	40.95

*Largest mean difference.

**High scores reflect more positive attitudes; low scores reflect more negative attitudes. Because each scale has a different number of items, and therefore different high-low ranges, comparisons can only be made relative to one scale at a time. Scores on one scale cannot be compared to scores on another scale.

TABLE 4.39

DISCRIMINATE FUNCTION TO PREDICT TYPE OF PROGRAM MEMBERSHIP FOR ATTITUDES/VALUES OF THE TEACHER

Variables	F Statistic	Wilks' Lambda	Significance	Standardized Discriminate Coefficients	Significance of Change by-Adding This Variable
Children Learn Passively	104.850	.8815	<.000	- .5344	<.000
Participation	39.233	.8839	<.000	- .3478	<.000
Importance of Home Learning	16.481	.8218	<.000	- .2659	<.000
Children should be treated uniformly	12.237	.8091	<.000	- .2727	<.000
Children are basically good	5.786	.8031	<.000	- .1732	= .007
Teacher authority is absolute	3.993	.7989	<.000	+ .1859	= .025
Uselessness of parent conference	2.945	.8959	<.000	- .1833	= .054
Parent appreciation of teacher	4.642	.7912	<.000	- .1207	= .015
Difficulty with parents of problem children	2.469	.7887	<.000	+ .1060	= .076
Irritability with children	1.764	.7869	<.000	+ .0965	= .132
Control-Compliance	1.065	.7858	<.000	- .0837	= .240

Wilks' Lambda = 0.7858
Chi Squared = 186.697
Significance = .0001

Canonical Correlation = .463
r^2 = .2144 or 21.4% variance explained

Actual Membership	Predicted Membership Non-Head Start % of Row	 Head Start % of Row
Non-Head Start	66.9 (N=236)	33.1 (N=117)
Head Start	26.6 (N=114)	73.4 (N=315)

Percent correctly classified (corrected for unequal group size) = 70.5%.

Wilks' Lambda to .7858 and only explains 21.4 percent of the variance in program membership (canonical correlation = .463; r^2 = .214). While all 11 variables have statistically significant effects, only the first four variables (children learn passively, participation, importance of home learning, and treat children uniformly) have change effects greater than .001 probability. These first four variables reduce Wilks' Lambda to .8091 and the addition of all other seven variables to the function only results in an additional reduction to .7858. For purposes of simplifying analysis efforts, these first four variables should be retained in efforts to statistically control for systematic program differences.

Attitudes Towards Mainstreaming

The Teacher Attitude and Opinion Interview was discussed in Chapter 3. The two subscales appeared to measure different attitudes and it was recommended that they be treated as independent measures. Scale I measures attitude towards the concept of mainstreaming and Scale II assesses the perception of constraints to mainstreaming efforts. Table 4.40 presents the mean scores for Scale I (attitude towards mainstreaming) by handicapping condition and program type.

TABLE 4.40

MEAN SCORES ON ATTITUDE TOWARDS MAINSTREAMING* BY PROGRAM TYPE AND HANDICAPPING CONDITION

Handicapping Condition	Program Type	
	Head Start Mean Score	Non-Head Start Mean Score
Visually impaired	31.8 (N=20)	19.5 (N=2)
Blind	26.0 (N=1)	24.5 (N=2)
Hearing impaired	26.7 (N=19)	37.1 (N=11)
Deaf	32.4 (N=5)	52.0 (N=2)
Physical handicap	25.7 (N=80)	38.0 (N=65)
Speech impaired	29.1 (N=124)	44.0 (N=54)
Health or developmentally impaired	27.1 (N=74)	42.9 (N=31)
Mentally retarded	28.8 (N=49)	50.9 (N=129)
Specific learning disability	33.0 (N=27)	38.1 (N=24)
Serious emotional disturbance	28.7 (N=30)	40.9 (N=33)

*Minimum possible score: 12 most positive attitude towards mainstreaming
Maximum possible score: 84 least positive attitude towards mainstreaming.

With the exception of some variability in the low incidence handicaps, the Head Start teachers show substantially lower scores (more positive attitude towards mainstreaming) than do non-Head Start teachers. Differences vary from as little as five points (learning disability) to as large as 22 points (mentally retarded). This more positive attitude toward the concept of mainstreaming may be due to any number of factors. Possible explanations could be that the populations serviced by Head Start are less severely handicapped so they are easier to mainstream; in-service training efforts may be more directed to this topic; mainstreaming occurs naturally within Head Start and it is therefore not a "new" concept; or the highly probable indication that all but a very few mainstreamed children are Head Start children only, therefore giving the Head Start teachers more experience and exposure to the mainstreaming issues. Regardless of the source of this attitude difference, the presence of the difference is important.

This attitude difference between Head Start and non-Head Start programs documents effects of the programs which are demonstrably different. It will be crucial to statistically control for these differences when conducting comparisons between-groups. This pretest attitude difference also suggests that when conducting within-groups analyses for pretest-posttest differences, the results may be expected to vary by program type--non-Head Start programs can improve (have more positive attitudes) quite a bit more than Head Start programs who already have positive attitudes.

Mean scores for Scale II (perceived constraints to mainstreaming) are shown in Table 4.41. Mean differences are very small for this measure. A difference of 2.5 is the largest (for mentally retarded) and most differences are 1.0 or less. Differences between programs are not large enough to consider efforts for statistical controls to be warranted. However, since a more favorable attitude towards mainstreaming is often a desired goal of many programs, even small changes in attitude toward mainstreaming (as measured by Scale I) may improve the "treatment effects" of each

TABLE 4.41

MEAN SCORES ON PERCEIVED CONSTRAINTS TO MAINSTREAM* BY PROGRAM TYPE AND HANDICAPPING CONDITION

Handicapping Condition	Program Type Head Start Mean Score	 Non-Head Start Mean Score
Visually impaired	26.3 (N=20)	27.5 (N=2)
Blind	24.0 (N=1)	26.0 (N=2)
Hearing Impaired	25.7 (N=19)	24.6 (N=11)
Deaf	19.8 (N=5)	20.0 (N=2)
Physical handicap	26.6 (N=80)	25.7 (N=52)
Speech impaired	25.8 (N=124)	24.7 (N=53)
Health or developmentally impaired	26.5 (N=74)	25.0 (N=30)
Mentally retarded	25.4 (N=49)	22.9 (N=129)
Specific learning disability	24.5 (N=27)	23.5 (N=24)
Serious emotional disturbance	25.2 (N=30)	25.9 (N=9)

*Minimum possible score: 5 (Large number of perceived constraints)
Maximum possible score: 35 (Few perceived constraints)

program over a long period. Attitudes of long standing however, change slowly and sometimes very minutely, if at all. If there are certain other measures which may change more easily and which may also serve as precursors to changes or indicators of change in more deeply embedded attitudes, then it is possible that these other measures because of their sensitivity to early change, could serve as alternate measures. Scale II measures changes in the teachers identification of fewer obstacles to mainstreaming. To the extent that fewer perceived obstacles is an early indicator of attitude change toward mainstreaming then Scale II may provide an efficient measure for this. Since it may serve as a good indicator of early attitude changes which is in progress or is just developing, Scale II should be retained as a secondary dependent measure in order to estimate time-lagged effects.

Summary and Recommendations

Attitudes, values, and characteristics of teachers have no less importance in determining the eventual effects of a program, than does the curriculum that is taught to the child or the services received by the child and family. To the extent that programs select teachers with different characteristics, or by virtue of low rates of personnel turnover, they modify certain characteristics of their teachers, then the resulting "effects" of the respective programs are also modified. Where these differences can be detected, it is crucial to control for their systematic effects. Such differences were found in some key characteristics of teaching staff. These characteristics require statistical corrections in the analysis for between-group comparisons, and will require interpretation considerations for within-group comparisons. Those key characteristics are:

- Demographic characteristics--enrollment levels, teacher salary, teacher education level, and experience with preschool handicapped children vary dramatically by program type. Special statistical controls are necessary to equalize teachers on these variables and interpretations of the results will require caution.
- Attitudes toward education and parents--Four attitude indicators (children learn passively, participation, importance of home learning, and children should be treated uniformly) show major differences by program type, requiring statistical controls for group comparisons.
- Attitude toward mainstreaming--there are two findings of note on this measure:
    1. The attitude measure directly assessing the concept of mainstreaming suggests substantial differences by program type. However, since mainstreaming is almost totally confounded by program type (Table 4.46) for purposes of group comparisons, mainstreaming will be considered as a treatment effect (this is discussed in greater detail in the next section, PROGRAM CHARACTERISTICS).
    2. The attitude measure assessing precursor attitudes (obstacles to mainstreaming) shows no group differences, but may serve as a time-lagged estimate of potential changes in attitudes toward mainstreaming. This measure will be retained as a secondary dependent variable.

CHARACTERISTICS OF PROGRAMS

Certain characteristics of the programs sampled for the study may have significant effects on outcome measures or may be systematically different for Head Start and non-Head Start programs. Such characteristics as the size of the program, the amount of available funds, or the amount of staff for example, could systematically effect the amount or quality of services provided to the handicapped child. Since such differences in instruction are presumed to effect developmental progress as assessed by the dependent measures, it is crucial to identify differential program effects and to control for their systematic effects. Data on two types of program variables were collected on a subset of participating programs. Some programs were unable to supply the necessary data. Those variables were: characteristics of the programs (enrollment levels, budgets, mainstreaming options, and staff); and adjunctive variables to programs (amount of parent participation, training, and related services).

Characteristics of Programs

These demographic characteristics roughly categorize programs by variables which tend not to fluctuate from year to year and are generally stable throughout any given year. While a given program might make changes in curriculum materials from one year to the next, for example, that program tends not to change curricula frequently during an academic year. Five specific variables are addressed in this regard: budget, enrollment levels, curriculum, training needs, and mainstreaming options.

Budget. Table 4.42 presents program budgets expressed as per-child expenditures and shows that the majority of Head Start programs (56%) have expenditures within the $1,000 to $1,500 per child range. However, most of the non-Head Start programs have per child expenditures above $2,500 (64.9%). These differences in the relative expenditures per child reflect substantial differences in the capability of some programs to utilize other resources, maintain teaching staff, provide training, and conduct other upgrading activities.

TABLE 4.42

PER CHILD EXPENDITURES BY PROGRAM TYPE

Budget	Program Type	
	Head Start % of Column	Non-Head Start % of Column
Total	100.0 (N=53)	100.0* (N=48)
$ 500 per child or less	9.4 (N=5)	12.5 (N=6)
$ 501 to $1,000 per child	5.6 (N=3)	2.1 (N=1)
$1,001 to $1,500 per child	56.6 (N=30)	4.2 (N=2)
$1,501 to $2,500 per child	20.8 (N=11)	16.7 (N=8)
$2,501 to $5,000 per child	5.6 (N=3)	22.9 (N=11)
Over $5,000 per child	1.8 (N=1)	41.7 (N=20)

*Two non-Head Start programs did not report these data.

Enrollment levels. Overall enrollment levels for programs are shown in Table 4.43. Almost all of the non-Head Start programs (91.5%) have total enrollments of less than 100 children, while Head Start programs are fairly equally distributed between less than 100 children and up to 1000. Given that many non-Head Start programs have smaller budgets than Head Start programs, this smaller overall enrollment is consistent.

TABLE 4.43

ENROLLMENT LEVELS BY PROGRAM TYPE

Enrollment Levels	Program Type	
	Head Start % of column	Non-Head Start % of column
Total	100.0 (N=53)	100.0 * (N=47)
Less than 100 children	26.8 (N=11)	91.5 (N=43)
100 to 500 children	33.9 (N=18)	4.3 (N=2)
250 to 500 children	22.6 (N=12)	*
500 to 1,000 children	18.9 (N=10)	2.1 (N=1)
Over 1,000	3.8 (N=2)	2.1 (N=1)

*Three non-Head Start programs did not report these data.

Table 4.44 shows the enrollment of handicapped children. The frequency of high and low enrollments for handicapped children is consistent across program types. However, since the Head Start and non-Head Start programs have similar enrollments of handicapped children, but the non-Head Start programs have a smaller overall enrollment, then the higher concentration of handicapped children is in the non-Head Start programs. This indicates that the non-Head Start programs are actually segregated programs with few, if any, opportunities for mainstreaming for their handicapped children. This confirms the discussion of the previous section (ATTITUDES AND CHARACTERISTICS OF TEACHERS) in which average class enrollments (Table 4.35) were shown to be smaller for non-Head Start programs and to be comprised almost exclusively of handicapped children.

TABLE 4.44

HANDICAPPED ENROLLMENT LEVELS BY PROGRAM TYPE

Handicapped Enrollment	Program Type	
	Head Start % of column	Non-Head Start % of column
Total	100.0 (N=53)	100.0 * (N=47)
Less than 25	50.9 (N=27)	55.5 (N=27)
25 to 50	24.5 (N=13)	29.7 (N=14)
50 to 100	18.9 (N=10)	8.5 (N=4)
100 to 300	3.8 (N=2)	4.2 (N=2)
Over 300	1.9 (N=1)	2.1 (N=1)

*Three non-Head Start programs did not report these data.

Mainstreaming Options. Information on the extent of mainstreaming used by each program was assessed from two sources: program directors who reported on the use of mainstreaming throughout their program; and the teachers report of whether the handicapped child being studied was mainstreamed or not. Table 4.45 presents the information reported by program directors on the availability and use of mainstreaming throughout their programs. According to these directors, all Head Start programs mainstream their handicapped children while one half of the non-Head Start programs

TABLE 4.45

NATURE OF MAINSTREAMING BY PROGRAM TYPE

Nature of Mainstreaming	Program Type	
	Head Start % of Programs	Non-Head Start % of Programs
Total	100.0 (N=53)	100.0 (N=47)
Not mainstreamed	*	56.3 (N=27)
Mainstreamed for Non-classroom activities	*	2.1 (N=1)
Mainstreamed	100.0 (N=53)	41.7 (N=20)
	% of mainstreamed only for each Program	
Complete mainstreaming of handicapped child into a regular classroom (no supportive services provided)	35.9 (N=19)	40.0 (N=8)
Complete mainstreaming of handicapped child into a regular classroom with supportive assistance provided by a specialist	79.3 (N=42)	60.0 (N=12)
Complete mainstreaming of handicapped children in a classroom where the regular classroom teacher and a special education teacher cooperatively work with all children (a team arrangement)	22.6 (N=12)	25.0 (N=5)
Reverse mainstreaming in which normal children become part of a special education class	5.7 (N=3)	15.0 (N=3)
Partial mainstreaming where handicapped children are in a special education class but go to mainstreamed classes for one or more regular classroom activities	15.1 (N=8)	30.0 (N=6)
Handicapped children receive services from your program but are not mainstreamed	7.5 (N=4)	35.0 (N=7)

provide mainstreaming. The one half of the non-Head Start programs who do not provide mainstreaming are categorical programs that only serve the handicapped. With the exception of one option category, the availability of mainstreaming options are very similar between program types. The option showing a slight difference is the lower frequency of non-Head Start programs (60%) which provide complete mainstreaming to the handicapped with assistance from a specialist, compared with the higher frequency for Head Start programs (79.3%).

The second source of information on mainstreaming is the child's teacher. These data are presented in Table 4.46. According to the teachers 98.8 percent of all Head Start handicapped children are mainstreamed compared with only 13.3 percent from non-Head Start programs.

TABLE 4.46

DISTRIBUTION OF PROGRAM TYPE BY WHETHER THE CHILD IS MAINSTREAMED--AS REPORTED BY THE TEACHER

PROGRAM TYPE	% of Row	Mainstreamed % of Row	Not Mainstreamed % of Row
Head Start	100.0 (N=429)	98.6 (N=423)	1.4 (N=6)
Non-Head Start	100.0 (N=353)	13.3 (N=47)	86.7 (N=306)

For some reason, mainstreaming is used by the non-Head Start programs at a considerably lower rate than it is reported to be available. This may reflect severity level (the more severely handicapped the child the more difficult to mainstream) or the self contained (and probably isolated) nature of the non-Head Start programs. The non-Head Start programs, as relatively segregated programs, tend to be housed in facilities with their own support services. State or community mental hospitals, for example, have little mainstreaming opportunity.

Table 4.47 presents the distribution of severity level for each handicapping condition according to whether the child is mainstreamed or not. The percentage of children in each handicapping condition and at each level of severity who ARE NOT mainstreamed (those handicapped children who are in self contained or segregated classes) is subtracted from the percentage of children who ARE mainstreamed. The table shows the differences between the percent of non-mainstreamed and mainstreamed children for each handicapping condition and severity level. A negative difference (minus)

TABLE 4.47

DISTRIBUTION OF HANDICAPPING CONDITION BY SEVERITY OF HANDICAP FOR MAINSTREAMED COMPARED WITH NON MAINSTREAMED CHILDREN*

PRIMARY HANDICAPPING CONDITION	SEVERITY LEVEL OF HANDICAP			
	Mild	Moderate	Severe	Profound
Visually Impaired	-1.4	+14.1	-17.5	+ 5.3
Blind	----	----	----	----
Hearing Impaired	+47.4	+ 9.5	+1.4	-40.2
Deaf	----	----	----	0
Physically Handicapped	+15.9	+18.8	-15.4	-19.2
Speech Impaired	+14.4	+ 6.5	-4.7	-16.2
Health or Developmentally Impaired	+17.3	-17.7	-1.1	+ 1.4
Mentally Retarded	+19.9	-11.1	+0.7	-4.6
Specific Learning Disability	-9.7	+18.2	-3.3	-5.3
Serious Emotional Disturbance	+20.9	-0.5	-23.1	+2.6

*(Percent of children with "X" handicap who are mainstreamed minus percent of children with "X" handicap who are not mainstreamed.

indicates that more children are in a segregated setting; a positive difference (plus) indicates that more children in this cateogy are mainstreamed.

The table shows that for some handicapping conditions the severity level and whether the child is mainstreamed or not are highly confounded. Hearing impaired, physically handicapped, speech impaired, and health or developmentally impaired all show consistent confounding by severity level and mainstreaming. If all "severely hearing impaired" cases are selected for special analysis, this would be almost the same as selecting only mainstreamed hearing impaired cases and the non-mainstreamed (or profoundly handicapped) would not be included in that selection. Any effects that would be identified could not clearly be attributed to the level of severity of the child, since the effects may also be the result of being enrolled in a mainstream program.

While it is important to distinguish between the effects of programs, the effects of mainstreaming, and the effects of levels of severity, to a certain extent these effects can only be estimated from the given data. Since mainstreaming is confounded by program type (98% of all Head Start programs mainstream their children compared with only 13% of non-Head Start programs), mainstreaming itself must be considered as a treatment effect which is present in Head Start and absent in non-Head Start programs.

Also, evidence of small deviations tends to confirm earlier suspicions of some operational difficulty with the concept of "severity." For example, Table 4.47 shows that most "mildly learning disabled" are in segregated settings while most "moderately learning disabled" are in mainstream classes. As discussed previously, level of severity was ascertained via teacher judgment, and it can be expected that the criterion referent for severity level for mainstreamed teachers is different from teachers in a segregated setting. In other words, a teacher in a mainstream setting could be expected to rate the severity level of a given child differently from the severity level rating assigned to the same child by a teacher in a segregated setting. These variables (which show evidence of confounding) must be carefully considered in conducting between-group comparisons, and may deserve special posttest considerations.

Curriculum. Table 4.48 shows that the percentage of programs electing to use standardized curriculae is similar for both Head Start and non-Head Start programs (69.8% and 72.3% respectively). However, the non-Head Start programs appear to have many more standardized curriculae available to choose from. While the Peabody was selected by comparable percentages from both programs (72.9% and 67.7% respectively) the non-Head Start programs have much higher selection rates for all other curricular choices (with the notable exception of the LAP-C). Overall, it appears that the Head Start programs must make decisions concerning curriculum selection from a much smaller pool of curriculum resources. While not important to statistically control for, this information may be important in analyzing and interpreting the final study findings.

TABLE 4.48

TYPE OF CURRICULUM BY PROGRAM TYPE

Curriculum	Head Start % of Column	Non-Head Start % of Column
Total	100.0 (N=53)	100.0 (N=47)
Do not use any standardized curriculum with handicapped	30.2 (N=16)	27.7 (N=13)
Use standardized curriculum of one or more kinds	69.8 (N=37)	72.3 (N=34)
	% of Programs Using Standardized Curriculum for Each Program	
Portage	29.7 (N=11)	50.0 (N=17)
Peabody	72.9 (N=27)	67.7 (N=23)
Learning Accomplishment Profile - Curriculum	45.9 (N=17)	32.4 (N=11)
Cognitive (Ypsilanti)	10.8 (N=4)	5.9 (N=2)
Montessori	10.8 (N=4)	26.5 (N=9)
Frostig	5.4 (N=2)	55.9 (N=19)
Other Type	24.3 (N=9)	58.8 (N=20)

Adjunctive Program Variables

Certain variables are important to successful progress of the child, but which are indirectly related to direct services provided to the child by the program. These include parent participation, training needs, and the coordination of other services.

Parent Participation in Program Activities. Table 4.49 shows the extent of parent participation in the activities of the programs. (Table A4 in the Appendix presents the types of activities parents participate in by program type.) There are no substantial differences in the extent of particpation by type of program nor in the types of activities (see appendix). While this variable can be ignored for purposes of between-group comparisons, it may be important in examining within group progress and differential effects of parent involvement efforts across programs. It is typical that extensive parent involvement is a goal of many preschool programs. To the extent that progress towards such a goal is important to assess, then pretest-posttest comparison within groups may be important.

TABLE 4.49
EXTENT OF PARENT PARTICIPATION BY PROGRAM TYPE

Extent of Participation	Program Type Head Start % of Column	 Non-Head Start % of Column
Total	100.0 (N=429)	100.0 (N=353)
No Participation	35.0 (N=150)	32.6 (N=115)
1 to 3 hours per month	37.5 (N=161)	40.5 (N=143)
2 to 3 hours per week	16.1 (N=69)	18.1 (N=64)
4 or more hours per week	11.4 (N=49)	8.8 (N=31)

Staff for the Handicapped Child and Training Requirements of Programs. The purposes for which staff are employed and their own perceived needs determined, to a large extent, inservice training requirements of the programs. Table 4.50 shows that programs who employ staff exclusively for working with the handicapped are primarily non-Head Start programs:

TABLE 4.50
PROGRAMS EMPLOYING STAFF EXCLUSIVELY FOR THE HANDICAPPED ONLY

Staff Employed for Handicapped Only	Program Type Head Start % of Programs	 Non-Head Start % of Programs
Total	100.0 (N=53)	100.0 (N=47)
Full-time teachers	26.4 (N=14)	82.9 (N=39)
Part-time teachers	24.5 (N=13)	42.6 (N=20)
Full-time resources staff	47.2 (N=25)	51.1 (N=24)
Part-time resource staff	43.4 (N=23)	59.6 (N=28)
Volunteers	24.5 (N=13)	44.7 (N=21)
No Staff employed for the Handicapped ONLY	22.6 (N=12)	12.8 (N=6)

82.9 percent employ fulltime teachers and 51.1 employ fulltime resource staff compared with 26.4 percent and 47.2 percent respectively for Head Start programs. This might initially suggest that the non-Head Start programs are larger, service more children, and have larger staffs which are supported by larger budgets. However, as discussed previously they tend to have small enrollments and be funded at lower rates. The higher rate of fulltime staff for the handicapped confirms previous findings that these programs are more oriented to only handicapped children.

The finding is substantiated again from perceived training needs of the staff (Table 4.51). Major differences in perceived needs are in the areas of theory and practice of mainstreaming and in the understanding of handicapping conditions. Head Start teachers more frequently indicate training needs in these areas (65% and 73%) compared with non-Head Start teachers (34% and 26%). Considering the education and specialization areas (Tables 4.29 and 4.30) the needs identified in these "special education areas" are certainly appropriate for Head Start personnel who have very little, if any, special education training.

TABLE 4.51
DISTRIBUTION OF PROGRAM TYPE BY PREFERRED TRAINING NEEDS

Preferred Training Needs	Program Type Head Start % of Row	 Non-Head Start % of Row
Total	54.9 (N=429)	45.1 (N=353)
Knowledge of Head Start Performance Standards	54.7 (N=35)	45.3 (N=29)
Classroom Management	44.6 (N=95)	55.1 (N=118)
Individualized Instruction	59.9 (N=145)	40.1 (N=97)
Preparation of Individualized Learning Objectives	46.0 (N=97)	54.0 (N=114)
Working with Parents	58.8 (N=67)	41.7 (N=47)
Strategies to Recruit Handicapped Children	51.2 (N=43)	48.8 (N=41)
Screening and Assessment	44.1 (N=89)	55.9 (N=113)
Theory and Practice of Mainstreaming	65.2 (N=90)	34.8 (N=48)
Specific Training for Handicapped Conditions	58.4 (N=227)	41.6 (N=162)
Understanding Handicapping Conditions	73.8 (N=177)	26.3 (N=63)
Other	6.9 (N=8)	93.1 (N=59)

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Related services. Many services provided to the child are not provided directly by the preschool program in which the child is enrolled. Table 4.52 shows that approximately one third of the children sampled receive additional services (33.1% of Head Start and 28.0% of non-Head Start). To the extent that these services facilitate child growth and development those children receiving services may experience special effects of these treatments. It is possible that these related treatment effects might obscure more direct program related effects.

TABLE 4.52

DISTRIBUTION OF PROGRAM TYPE AND CHILDREN WHO RECEIVE ADDITIONAL SERVICES BEYOND THOSE PROVIDED BY THE PROGRAM

Receive Additional Services	Program Type	
	Head Start % of Column	non-Head Start % of Column
Yes	33.1 (N=142)	28.0 (N=99)
No	66.9 (N=287)	72.0 (N=254)
TOTAL	100.0 (N=429)	100.0 (N=353)

Table 4.53 presents information on the types of services typically coordinated by programs. All of the services appear to be utilized and coordinated equally by both Head Start and non-Head Start programs with the exception of those services oriented primarily to the poverty populations (food commodities, food stamps, medicaid, and special purpose agencies). As expected those are used more frequently by Head Start programs, and confirms previous findings that the population served by the two programs are markedly different in terms of needs and resources.

TABLE 4.53

COORDINATION OF SERVICES BY PROGRAM TYPE

Agency or Service Coordination Occurs With	Program Type	
	Head Start % of Programs (N=53)	Non-Head Start % of Programs (N=47)
Private practitioner/consultant	86.8 (N=46)	82.9 (N=39)
Hospital	73.6 (N=39)	63.9 (N=30)
Health clinic or department (public or state)	92.5 (N=49)	85.1 (N=40)
Mental health clinic or department (public) or state)	92.5 (N=49)	78.7 (N=37)
Medicaid	79.3 (N=42)	44.7 (N=21)
Food Stamps Program	69.8 (N=37)	19.2 (N=9)
Food Commodities	35.9 (N=19)	17.0 (N=8)
Special Purpose Agencies (Easter Seal, Crippled Children Association, etc.)	84.9 (N=45)	68.1 (N=32)
Planned Parenthood	45.3 (N=24)	25.5 (N=12)
Family counseling agencies	69.8 (N=37)	72.3 (N=34)
Day Care Program	56.6 (N=30)	57.5 (N=27)
Other Head Start programs	77.4 (N=41)	53.2 (N=25)
University affiliated facilities	79.3 (N=42)	76.6 (N=36)
Other	45.3 (N=24)	38.3 (N=18)

Summary and Recommendations

Review of these demographic program characteristics and adjunctive program variables confirms previous indications that the two program types are very different, both in terms of the populations served and in terms of the specific nature of the programs themselves. The following conclusions require analytic considerations:

- The mainstreaming effort for handicapped children is confounded with program type.
- Severity level is:
  1. confounded with mainstreaming and with program type;
  2. of suspect validity.
- Dramatic differences in several variables confirm differences in the scope and focus of programs and in the identified primary service populations:
  1. budget differences reflect differing levels of support;

2. curriculum resources vary markedly by program type;
3. perceived training needs, service coordination, and staffing patterns consistently indicate different service populations;
4. enrollment ratios of handicapped to non-handicapped children confirm differences in populations served.

One major objective of the study is to provide comparative judgements on the effects of Head Start and non-Head Start programs (and, where possible, a non-served group). To enable this type of comparison some special statistical and design considerations are necessary:

- In order for the effects of severity level to be statistically controlled for (eliminating one major confounding variable), valid estimates must be obtained. As stated earlier in this chapter, post-test data collection verify handicap severity.
- Analysis alternatives will be designed which allow for the anticipated difficulties in conducting all of the planned comparisons between groups. This could include:
    1. Conducting extensive within-groups analyses and making certain between-groups comparisons on a conceptual basis only with little (or no) direct statistical comparisons;
    2. Utilizing covariates (and, where possible, allowing a single variable to serve as a "proxy" for a group of variables) to statistically equalize groups.

CLASSROOM INTEGRATION

The Prescott-SRI Child Observation System was selected to be used in collecting data related to a major outcome variable of the study: children's behavior and social interactions. This variable was specified as a possible indicator of the impact a Head Start or non-Head Start program may have upon the handicapped children it serves. Additionally, the measure provided data which helped to describe the differential treatment effects of programs. For example, different types of programs may enable or encourage different kinds of child behaviors to occur at different frequencies. These differences in rates of occurrence may be related to program variables, such as pupil/teacher ratio or the ratio of handicapped to non-handicapped children in a given class. These observation data were recorded on all 782 handicapped children in the Head Start and non-Head Start samples as well as a group of 219 non-handicapped children.

The purpose of this section is to describe the procedures utilized in reducing the number of variables to be considered for analysis and to identify group differences between the Head Start and non-Head Start study samples for the Prescott-SRI data. As previously discussed, it is important to identify any pre-existing group differences so that statistical or methodological techniques can be utilized to control for these differences. This section includes a brief description of the observation instrument, a review of decisions related to analysis, a description of group differences by certain key variables, and a discussion of proposed data reduction techniques.

Description of the Prescott-SRI Child Observation System

This observation system is used to record the nature and kind of activities and social interactions in which children engage within the preschool environment. The Prescott-SRI Child Observation System is an especially complex and comprehensive system which requires coding a specific child's (focus child) behavior every 12 seconds during two separate 20-minute observation periods. The coding of child behaviors on the Prescott-SRI occurs across three dimensions of behavior:

1. child activity codes
2. object of the child's attention
3. activity continuity.

1. The child activity codes contain four broad areas, each of which is considered as a continuum of possible categories. The four areas are:

- I - Integrates: Codes in this category were used to record active involvement with tasks or social situations. The target child accomplished this by continuing activities, structuring a task, studying a problem, or acting creatively.
- T - Thrusts/Initiates: Codes in this category were used to record behavior initiated by the focus child, for example, selecting an activity; asking for comfort, reassurance, or recognition; asking questions; giving information; or stating preference.
- R - Receives: Codes in this category were used to record inputs to the child and his/her reaction to inputs for which a response was expected. Inputs included statements of information, questions about facts, invitations to relate to others.
- D - Defends, Responds: Codes in this category reflected avoiding or ignoring, crying, anger, defending rights, and asserting ownership.

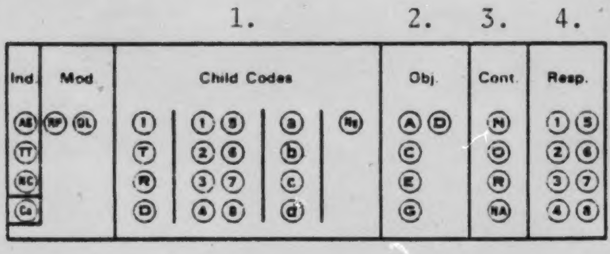
Within the continuum of possible categories for these four areas, there are 54 child activity codes. These child activity codes are presented in Table A6 in the appendix. Most of the child codes can be further specified in terms of the object of the focus child's attention (object code) and an index of continuity for the focus child's activity (continuity code). For example, if the focus child continues the activity of stringing beads, this would be coded "I2c-E-0." The "I2c" child code identifies bead stringing as a closed, structured activity. The "E" refers to the focus of the child's attention (in this case the beads) which is designated as the "environment." The code "O" indicates that the child's activity is ongoing because in this situation there is continuity to the bead stringing behavior.

2. The object of a focus child's attention was designated by separate codes:

- A - an adult
- C - another child;
- G - a group of children with or without adults;
- D - a handicapped child or group of children including one or more handicapped children;
- E - environment.

3. Activity continuity was a final area in which the continuous nature of a child's behavior was examined. Activity continuity referred to whether the focus child was involved in an activity designated as new or ongoing, or whether the child was returning to a previous activity, or was not involved in any activity at all. In addition, for some of the "Receives" (R) codes it was possible to record the focus child's response to the stimuli. For example, if another child asks the focus child if s/he would like a cracker; and the focus child says, "no, thank you," the activity would be coded "R_2-C-O-7." The "R_2" indicates that the focus child received an offer to share and the "C" designates that this offer was from another child. If this has happened during snack time the "O" could refer to the fact that snack was an ongoing activity. The "7" identifies "no, thank you" as an active and appropriate response to the offer.

These three behavior dimensions are represented in the recording booklet as illustrated below:



1. = Child Activity Codes
2. = Object Codes
3. = Continuity codes

The final column (4) is for the recording of the specific child response, if applicable.

For standardized recording observers were provided with a beeper timed at 12 second intervals to signify recording points. In addition, at the end of each 20-minute observation period, the observer completed an 11-item summary of more general behaviors displayed during the 20 minutes. (Table A5 in the appendix presents the summary coding forms.) The items covered in the summary coding included:

- program structure
- focus child's interaction and level of involvement with handicapped and non-handicapped children, and adults
- focus child's affect.

In summary, every 12 seconds, child activity data were coded by frame in the Prescott-SRI scoring booklet. Each frame included:

- child activity code
- object code
- continuity code
- response code, if applicable.

For each 20 minute observation period observers coded approximately 100 frames of child behavior. Two 20-minute periods were required for each child included in the study sample. The Prescott-SRI provided 54 different child activity codes, 5 object codes, 4 continuity codes, and 4 response codes which were utilized in recording the focus child's activities and interactions within the program environment. There are a large number of possible permutations of these child behavior codes (approximately 780 valid combinations). This large volume of variables must be reduced to a more manageable number.

Issues of Data Analysis and Reduction

Because the Prescott-SRI is being used both as a secondary dependent variable to show the effects of program treatments on certain child behaviors, and also as an independent variable to show the extent to which certain child behaviors can affect growth and development (as measured by the Alpern-Boll), there are four specific issues for consideration.

1. Reduction of the large quantity of observation codes to a small group (or a single indicator).
2. Identification of child codes which distinguish between program types.
3. Identification of similarities and differences in the nature and types of activities for observation codes.
4. Adequacy of reliability from observer to observer or session to session.

Subsample of "Normal" Children

In addition to the child code observation data which were collected on the handicapped Head Start and non-Head Start samples, the same kind of observation data was collected on a sample of non-handicapped children. The purpose of these data were to provide a reference group for the frequency counts of each behavior and also to enable the development of an interval measure. These data were considered as a normative frame of reference for rates of child behaviors exhibited by non-handicapped ("normal") children. In addition this "normative" sample was used to create standardized scores.

Data Reduction

Data collected utilizing the Prescott-SRI yielded over 780 specific individual variables which relate to the nature and extent of social interactions and behaviors of handicapped children with their handicapped peers, normal peers, and adults. Since it is not feasible to utilize each individual variable, and since the measure of behaviors is in the form of frequency counts, there are two major data reduction tasks:

1. Reduce the quantity of variables,
2. Modify the nature of the measure for comparison purposes.

Key Variables: The first step in the process of identifying key variables in order to reduce the quantity of variables was to review the frequency distribution for all coded frames. These frames included all child activity, continuity, and object codes which were recorded for each child in the sample. If the rate of occurrence of any child behavior code was 100 or greater, that particular code was retained for the next variable reduction step. Child behavior codes with frequency counts of less than 100 were eliminated from consideration for the following reasons: (1) low frequencies were not sensitive to change, and (2) inclusion of low frequencies of child behavior codes could cause the data to be especially vulnerable to any systematic bias which might exist.

A total of 87 child behavior codes occurred with a frequency of 100 or more times. These 87 behavior codes were further examined by handicapping condition because it was felt that the low incidence handicaps (discussed previously) may be represented by behavior codes with relatively low frequencies (between 500 and 100 total frequency count). In examining the frequency of child behavior codes by handicapping condition three primary criteria were considered for retaining a child behavior code:

(1) A high frequency of occurrence of the child behavior code (codes appearing 1,000 times or more).

(2) Evidence that the rate of occurrence of the behavior code varied by handicapping condition.

(3) Evidence that the frequency of a given behavior or that differences between handicapped groups was conceptually logical.

These are not mutually exclusive criteria. If only one of the criteria was met, or if there seemed to be a logical explanation (why blind children exhibited a specific behavior more frequently than children with other kinds of handicapping conditions, for example) then the child behavior code could still be selected for further analysis. Since blind and deaf children were less likely than other handicapped children to be involved in group activities where passive attention was demonstrated (listening to a story being read to a group, or listening to a record or tape), several behavior codes for these low incidence groups were in fact retained.

After application of these procedures and criteria, a total of 44 child activity and object codes were retained. These behavior codes either occurred with sufficient frequency, showed differences in frequencies by handicapping conditions, or were consistent with the general body of knowledge about behaviors of children with specific handicapping conditions. These selected codes are discussed in more detail later.

Comparability: Because the child observation data collected by this instrument is a frequency count for specific coded behaviors, the data are only meaningful relative to the frequency counts for the same behavior code by other children. The transformation of these data to standardized scores also allows the data to more easily accommodate the analysis requirements. The complex path analysis model (proposed in Chapter 1) requires the use of an interval measure, and the transformation satisfies the requirements better than other alternatives.[1/] In order to insure comparability of the frequency counts (across behavior codes, and across other variables as well as other children), and in order to better meet the needs of the path analysis model, the frequency counts were transformed into standardized (Z) scores. Each frequency score was transformed using the formula for a standardized score:

$$Z = \frac{X-\bar{X}}{\sigma} = \frac{\text{Frequency Score - Mean Frequency}}{\text{Standard Deviation}}$$

Because the study population represents a restricted range in at least one known assessment area, it is highly probable that some of the behaviors being observed for by the Prescott-SRI represent areas where the range restriction issue would be a problem. (The problems with respect to range restrictions have been discussed previously in Chapter 3 and will not be reviewed here.) However, to avoid the range restriction problem with these data, and also in order to reference the "frequency counts" to some standard, the Z score transformation was conducted with data from a sample of non-handicapped children. The mean and standard deviation of each selected observation code from the non-handicapped sample were used to transform the frequency count for each handicapped child into a standardized Z score. The modified equation is:

$$\underset{\text{(for specific behavior code)}}{Z} = \frac{\underset{\text{(for Handicapped Child)}}{\text{Frequency Count}} - \underset{\text{(for non-handicapped sample)}}{\text{Mean Frequency}}}{\underset{\text{(for the non-handicapped sample)}}{\text{Standard Deviation}}}$$

[1/] While dummy variables can be used for categorical variables or essentially non-continuous data, they become cumbersome to the analysis effort when more than two or three are used.

To insure that the "non-handicapped sample" most closely approximated the full range of frequency counts for every selected observation code a small sample of handicapped children were included in this reference sample. Twenty-four children were randomly selected from the pretest data by handicapping condition in proportion to the incidence of that handicapping condition in the general population (6 speech impaired, 4 mentally retarded, 1 visually impaired, for example).

This transformation of the data provides a standardized score for each observation code which reflects the performance of the handicapped child in reference to the non-handicapped sample and also allows for comparability across behavior codes and other key variables such as handicapping condition. The transformation also better meets the needs of the analysis model.

Differences Between Programs

The Prescott-SRI contains over 780 usable codes for describing the behavior of the observed child in the program environment. As previously discussed, there are identifiable differences between Head Start and non-Head Start programs with respect to certain variables which can be expected to contribute to possible differences in the program environments. The level of education and salary of the teachers, for example, may result in teachers who structure their classrooms differently, encourage different levels of independence on the part of the child, or allow differing levels of adult-child interactions. An important difference in the programs which has already been partially discussed is the mainstream nature of the Head Start programs compared with the more restrictive "special education" emphasis of the non-Head Start programs. The non-Head Start classrooms are comprised predominately of handicapped children and there is little opportunity for child-to-child interactions of a mainstream nature in these programs. Because the Prescott-SRI contains codes for observing the frequency of interaction between handicapped and non-handicapped children, and because the availability of non-handicapped children differs so strongly (Head Start programs have many more non-handicapped children available), there is a strong indication to believe that the child interaction frequencies for some codes will vary substantially.

To examine this possibility another discriminant analysis was conducted using the 44 selected codes and the seven summary codes. The purpose was to examine the ability of the data to differentiate between Head Start and non-Head Start programs. The results of this analysis are presented in Table 4.54, and show that the resulting discriminant function predicts membership in program type with 85.6 percent[1/] accuracy. This suggests that programs do have substantial differences in the frequency of occurrence of certain observed behaviors. The discriminant function reduces Wilks' Lambda to .4704, indicating very good discriminating power, and includes twenty-six of the possible fifty-one codes (44 preselected codes and 7 summary codes). The canonical correlation of $r = .728$ is very high and explains over half of the variance (53.1%) for membership in program type.

While the discriminate function included 26 of the observation codes, only the first 12 meet the a prior limits for inclusion (significance of change by adding the variable $<.000$). The inclusion of the other 14 variables to the function only reduces Wilks' Lambda from .4905 to .4704, adding very little power to the function at the cost of more than doubling the number of variables used in the equation.

[1/] Corrected for unequal n per classification group.

TABLE 4.54: DISCRIMINATE FUNCTION TO PREDICT TYPE OF PROGRAM MEMBERSHIP FOR SRI CODES

Variables	F Statistic	Wilks' Lamba	Significance	Standardized Discriminate Coefficients	Significance of Change by Adding This Variable
1. NT8	344.128	0.6938	<.001	- 0.4209	<.000
2. ZOBJC	146.838	0.5838	<.001	+ 0.5429	<.000
3. ZOBJD	30.007	0.5621	<.001	- 0.1863	<.000
4. ZCONTINN	17.460	0.5294	<.001	- 0.1458	<.000
5. ZT4 D	10.141	0.5226	<.001	+ 0.0919	<.000
6. ZR3 A7	8.327	0.5170	<.001	- 0.1203	<.000
7. ZI6B E	6.792	0.5125	<.001	+ 0.0799	<.000
8. ZOBJA	6.842	0.5080	<.001	+ 0.3737	<.000
9. ZI6C E	7.093	0.5034	<.001	+ 0.2039	<.000
10. ZR7B C5	6.747	0.4990	<.001	+ 0.0732	<.000
11. ZCHLDCDR	5.999	0.4952	<.001	- 0.2161	<.000
12. ZI6B A	7.400	0.4904	<.001	- 0.1027	<.000
13. NT7	4.535	0.4876	<.001		.001
14. ZI6C D	3.609	0.4853	<.001		.001
15. ZI6B C	2.854	0.4835	<.001	Not reported because Significance of Change >.001	.001
16. ZT4 C	3.218	0.4814	<.001		.001
17. NT4	2.442	0.4799	<.001		.001
18. ZI4B E	2.715	0.4787	<.001		.001
19. NT6	2.209	0.4773	<.001		.001
20. ZR5B A	1.814	0.4762	<.001		.001
21. ZI2C E	2.195	0.4748	<.001		.001
22. ZI4A E	1.718	0.4737	<.001		.001
23. ZR7B C7	1.392	0.4729	<.001		.001
24. ZI1 G	1.148	0.4721	<.001		.001
25. ZCONTINO	1.353	0.4713	<.001		.001
26. NT2	1.574	0.4703	<.001		.001

Wilks' Lambda = .4704
Chi Squared = 578.484
Significance = <.000

Canonical Correlation = .728

r^2 = .5309 or 53.1% variance explained

Actual Membership	Predicted Membership	
	Non-Head Start % of Row	Head Start % of Row
Non-Head Start	81.9 (N=289)	18.1 (N=64)
Head Start	11.4 (N=49)	88.6 (N=380)

Percent correctly classified (corrected for unequal group size) = 85.6%

The 12 child code variables identified by the discriminate function are summarized in Table 4.55. For purposes of clarity the description of the code variables also reflect the directionality of differences between programs. Tables 4.56 and 4.57 present the mean scores (standardized Z scores) by program type for all of the key object-continuity codes and for the key child activity codes respectively (44 all total). These tables better illustrate differences in mean frequencies for these behavior codes. To the extent that mean frequencies are different from zero they also provide a referent with respect to the non-handicapped population. A superficial review shows that child behavior codes for the non-Head Start programs more often have large differences from zero than do Head Start programs (38 codes compared with 6 respectively). In general, this indicates that the frequency of these behaviors for handicapped children in Head Start more nearly approximates the frequency of occurrence for non-handicapped children than does the frequency of occurrence for children in non-Head Start programs. In other words, the Head Start handicapped children are more like the non-handicapped sample (with respect to these 44 identified variables) than they are the non-Head Start sample.

Three dimensions were evident within the Prescott-SRI child behavior codes that were identified by the discriminant function as differentiating between types of programs. These dimensions are:

- class composition (child/teacher ratio and handicapped to non-handicapped ratio),
- classroom activity structure (open, closed),
- social integration of handicapped children (mainstreaming).

These three dimensions are interrelated and it is not possible to explain the frequency of specific child behaviors strictly in terms of any one of these dimensions. However, in some cases, a

TABLE 4.55: SELECTED PRESCOTT-SRI CHILD CODES

Prescott-SRI Child Code	Description of Code
NT8	Head Start handicapped children are less often involved in interactions or tasks with other handicapped children.
OBJC	Handicapped children in Head Start more often receive from or give attention to non-handicapped children
OBJD	Handicapped children in non-Head Start programs more often receive from or give attention to other handicapped children or groups including handicapped children.
CONTINN	In Head Start programs fewer frames were recorded in which handicapped children were involved in new tasks or activities.
T4 D	Handicapped children in Head Start programs give fewer general informational comments to their handicapped peers.
R3 A7	Head Start handicapped children receive less adult help with tasks (while responding appropriately) than do handicapped children in non-Head Start programs.
I6B E	Handicapped children in non-Head Start programs are less likely to be involved in open-ended expressive group activities with attention focused on an object than are Head Start handicapped children.
OBJA	The attention of handicapped children in Head Start is less often directed at adults than is the attention of handicapped children in non-Head Start programs.
I6C E	Head Start handicapped children are not often involved in structured group activities with objects as the foci of their attention than are handicapped children in non-Head Start programs.
R7P C5	Head Start handicapped children receive more playful intrusions to which they respond defensively than do handicapped in non-Head Start programs.
CHLDCDR	Handicapped children in Head Start receive less input than do the handicapped focus children in non-Head Start programs.
I6B A	Head Start handicapped are involved less frequently in open-ended expressive group activities with their attention directed at adults than are handicapped children in non-Head Start programs.

TABLE 4.56: Z* SCORES FOR PRESCOTT-SRI OBJECT AND CONTINUITY CODE VARIABLES

PRESCOTT-SRI CODE	CHILD ACTIVITY CODE DESCRIPTIONS	NON-HEAD START	HEAD START
OBJA **	Summation of all frames in which the focus child's attention was directed at an adult	0.745	0.236
OBJC **	Summation of all frames in which the focus child's attention was directed at another child	– 1.070	– 0.126
OBJE	Summation of all frames in which focus child's attention was directed at some object	– 0.407	– 0.222
OBJG	Summation of all frames in which focus child's attention was directed at a group	– 0.312	0.135
OBJD **	Summation of all frames in which focus child's attention was directed at a handicapped child or group including a handicapped child	1.789	0.003
CONTINN **	Summation of all frames in which the focus child engaged in a new activity	0.245	– 0.030
CONTINO	Summation of all frames in which the focus child continued involvement in activity or interaction	– 0.299	– 0.163
CONTINNA	Summation of all frames in which the focus child is not involved in a specific task or activity	0.152	0.085

*Frequency counts for each variable were transformed to standardized scores for ease of comparability.

This transformation was conducted using distribution data (mean, standard deviation) from the sample of normal children (N-219) plus a proportionate sample of handicapped children (N=24, total N=243).

**Key variables identified by the discriminant analysis

TABLE 4.57: Z* SCORES FOR CHILD ACTIVITY CODE VARIABLES

PRESCOTT-SRI CODE	CHILD ACTIVITY CODE DESCRIPTIONS	NON-HEAD START	HEAD START
I1 A	Child's attention directed at an adult	0.378	0.223
I1 C	Child's attention directed at another child	– 0.402	0.337
I1 G	Child's attention is directed at a group without handicapped children	– 0.202	0.349
I1 D	Child's attention is directed at a handicapped child or group including one or more handicapped children	2.274	0.299
I2b E	Child maintains open-ended, expressive activity with focus of attention on some object	0.147	0.049
I2c E	Child maintains structured closed activity involving some object	0.163	– 0.031
I4a E	Child considers, contemplates, tinkers with some object	0.091	0.029
I4b E	Child adds a different prop or new idea	– 0.439	– 0.316
I6a A	Child participates with passive attention in a group activity with an adult as the focus of his/her attention	– 0.251	– 0.118
I6a E	Child participates with passive attention in a group activity with some object as the focus of his/her attention	– 0.141	– 0.120
I6b A **	Child participates in open-ended group activity with attention directed at an adult	0.881	0.122
I6b C	Child participates in open-ended group activity with attention directed at another child	– 0.359	– 0.048
I6b E **	Child participates in open-ended group activities with attention directed at some object	– 0.429	– 0.088

TABLE 4.57: (CONTINUED)

PRESCOTT-SRI CODE	CHILD ACTIVITY CODE DESCRIPTIONS	NON-HEAD START	HEAD START
I6b D	Child participates in expressive, open-ended group activity with attention directed toward a handicapped child or group including a handicapped child	0.612	– 0.065
I6c A	Child participates in closed structured groups activity with attention directed at an adult	0.037	0.148
I6c C	Child participates in closed structured group activity with attention directed at another child	– 0.406	– 0.038
I6c E **	Child participates in closed structured group activity with attention directed at some object	– 0.332	– 0.093
I6c G	Child participates in closed structured group activity with attention directed at the group	– 0.067	– 0.021
I6c D	Child participates in closed structured group activity with attention directed at a handicapped child or group including a handicapped child	1.778	– 0.066
T1a E	Child wanders with no apparent purpose with attention directed at some object	0.037	– 0.069
T4 A	Child initiates statements about his/her preferences, likes, dislikes with an adult	– 0.048	– 0.139
T4 C	Child initiates general statements with another child	– 0.656	– 0.131
T4 D **	Child initiates general statements with a handicapped child or group including a handicapped child	0.572	0.079
T7b C	Child initiates playful, exuberant behavior directed at another child	– 0.496	– 0.033
T7b E	Child initiates playful, exuberant behavior directed at some object	0.008	0.009
R3 A3	Child receives information or help with a task from an adult and is crying or whining	0.123	– 0.044

TABLE 4.57: (CONTINUED)

PRESCOTT-SRI CODE	CHILD ACTIVITY CODE DESCRIPTIONS	NON-HEAD START	HEAD START
R3 A7 **	Child receives information or help with a task from an adult and responds actively and appropriately	0.605	– 0.115
R5b A	Child receives praise from an adult	0.754	0.072
R7b C	Child receives a playful intrusion from another child	– 0.264	0.090
R7b C5 **	Child receives a playful intrusion from another child and responds by defending or asserting rights	– 0.432	– 0.089
R7b C7	Child receives a playful intrusion from another child and responds actively and appropriately	– 0.349	– 0.188
INDCNT1	Child attends to self - withdraws completely	0.092	– 0.081
MODRP	Child assumes he/she is in an imaginary role	– 0.223	– 0.160
CHLDCDI	Summation of all child codes which are used to describe active involvement in interactions or tasks	– 0.544	– 0.076
CHLDCDT	Summation of all child codes used to describe initiating behavior	– 0.434	– 0.166
CHLDCDR **	Summation of all child codes used to describe inputs received	1.058	0.170

child's behavior appears to be more related to one dimension than the other two. For example, some handicapped children in Head Start programs are less frequently involved in open-ended, expressive group activities with their attention directed toward adults. A possible explanation could be attributed to Head Start class composition which includes fewer adults than non-Head Start programs. In the case where Head Start handicapped children are less often involved in interactions with other handicapped children, it could be explained by the ratio of handicapped to non-handicapped children which in most Head Start programs is much lower than in non-Head Start programs. Similarly, in non-Head Start programs there is a higher frequency for handicapped children to interact with handicapped peers, since the classroom composition usually reflects only handicapped peers.

When child behavior codes were examined in terms of the dimension of social integration for handicapped children, several child behavior codes seemed reflective of this construct. Head Start handicapped children are more often involved in structured group activities with objects as the focus of their attention than are handicapped children in non-Head Start programs. The data indicate the frequency of group involvement for Head Start handicapped children more closely approximates the mean for the "normal" sample (the Z scores are very close to zero). Head Start handicapped children may indeed be more like normal children than different, however this raises the caution of how severely involved the Head Start handicapped children are. On the other hand this finding could support the premise of mainstreaming and the positive impact upon handicapped children gained by their social integration with normal peers.

The finding that Head Start handicapped children received more playful intrusions from non-handicapped peers than those focus children in non-Head Start programs is possibly indicative of social integration being achieved by handicapped children. It could also be explained, at least partially, by the fact that Head Start programs have many more non-handicapped peers available. In general, few, if any, non-handicapped children were integrated within non-Head Start programs.

The frequency of occurrence of both structured group activities and open-ended activities was more similar to the non-handicapped sample (Z scores are very close to zero) for Head Start children. Non-Head Start children on the other hand had substantially fewer occurrences of both behavior codes. The question of how such activity structure affects the behaviors of children is not always clear. However, in Head Start classes there appears to be more opportunity for children to be self-directed and to initiate activities and interactions in a less rigidly structured, teacher-controlled environment. In classes where there is more teacher directed activity, the dimension of child control over the environment and his or her own reactions to and behaviors within it, are subject to more defined parameters. The nature and number of open-ended (expressive) vs. closed or structured activities available for children to become involved in is possibly determined by whether the program structure itself is open or closed. This availability of opportunity in turn affects the behaviors children exhibit in the preschool environment. Head Start programs, as a group appear to have a greater range of open-closed activities compared with non-Head Start programs which simply have fewer of both kinds.

Because there are notable differences between the two programs that are reflected in several specific behavior codes, and because there appears to be some common dimensions of the focus child's attention, it is necessary to ascertain if the large number of variables can be reduced further. In order to adequately undertake statistical corrections for differences between programs, the number of correction terms selected for use must be held to a minimum. (A large number of "corrections" may inadvertently eliminate all but error variance from the analysis.)

In order to further reduce the number of child behavior codes a factor analysis with varimax rotations was conducted to examine the possibility that underlying constructs within the behavior coding system existed. If underlying constructs were present it could allow for the elimination of certain groups of variables by using a single indicator. Such underlying constructs could also assist in interpreting differences between programs.

The results of the factor analysis produced eight identifiable "factors." Two of the factors account for 48 percent of all of the variance explained by the set of factors. The other six factors account for approximately equal (but small) amounts of the variance. The two factors accounting for the largest explained variance are explained below:

FACTOR 1 - Initiated Interaction

Variable	Factor loading	Description of Variable
T4XXA	.3144	Child initiates statements about his/her preferences, likes, dislikes with an adult
NT2	.8946	Summary code rating for the extent of participation and involvement in center activities
NT4	.4119	Summary code rating for the level of interaction with adults
NT5	.7311	Summary code rating for the observed affect of the child
NT7	.4655	Summary code rating for the extent of involvement with other children.

Initiated Interaction: affirmative efforts to participate in center activities by interacting with other activity participants. This includes taking the initiate to express satisfaction, locating oneself in close proximity to participants, and actively seeing opportunities to participate.

FACTOR 2 - Interaction and Contact with non-Handicapped Children

Variable	Factor Loading	Descriptor of Variable
I6BxC	.4255	Child participates in open-ended group activity with attention directed at another child
I6CxD	-.3257	Child participates in closed structured group activity with attention directed at a handicapped child or group including a handicapped child
T4xxC	.5857	Child initiates general statements with another child
T7BxC	.5530	Child initiates playful, exuberant behavior directed at another child
R7BxC	.3193	Child receives a playful intrusion from another child
NT6	.3236	Summary code rating for observed hostility by the focus child
NT8	.4065	Summary code rating for the extent of involvement with other handicapped children.

Interaction and Contact with non-Handicapped Children: reciprocal interaction of a constructive, non-hostile nature with non-handicapped children. This includes initiating direct interpersonal contacts, maintaining attention, and encouraging (through affect and physical proximity) the reception of interpersonal contacts.

These two factors will be used for certain within group analyses by computing Factor Scores for each child. These Factor Scores are obtained by multiplying the factor loading for each variable in the factor times the standardized score for that variable. The sum of all products equals the factor score. In this way the Factor Scores for Factor 1 and for Factor 2 can serve as "proxies" (substitute variables) for several other variables, thus reducing the total number of Prescott-SRI variables.

Posttest data analysis efforts will again re-examine the Prescott-SRI by factor analysis to determine if similar factors re-emerge. Factor 1 and Factor 2, however, appear to be the most utilitarian factors at present. In combination, the factors account for 48 percent of all factor analysis variance and the identified constructs (initiated interaction and extent of interaction with non-handicapped children) are highly relevant to the specified goals of assessing classroom integration.

Interrater Reliability of the Prescott-SRI Child Observation System

As previously mentioned, the Prescott-SRI is an unusually complex and comprehensive instrument. Observer training required an intensive 7-day training session with a trainer/trainee ratio of 1/6. These sessions included familiarization of the coding system, practice recording child's behavior in preschool classrooms and day care centers, coding practice with video-tapes especially developed for the system, and frequent reliability checks made throughout the training process. The final criterion for certification in the Prescott-SRI was a three-hour exercise in which trainees coded video-taped sequences of children's behavior. Trainees were required to meet the .75 trainer/trainee reliability level in order to be qualified to collect observation data using this system.

Despite the strict .75 reliability standard for all trainees, there is some possibility that this reliability does not remain constant. As observers collect data in the field there is little continuous pressure to code behaviors consistent with the training standard. Often there is no second opinion available for validation of an observer's coding in difficult or ambiguous situations. In addition, some codes are more difficult to code consistently than others, and some codes occur with such low frequency that there is little opportunity for trainees to practice these.

One result of decreased reliability is the tendency for observers to lapse into more general codes about which there is little question. However, these codes do not provide as sensitive a description of the child behavior as is possible with this system. This study requires both detailed information and good reliability. Since children's behaviors from the pretest data collection will be compared with their posttest behaviors, it is crucial that reliability be maintained consistently across observers. Poor reliability could dramatically affect the pretest-posttest frequencies of codes by handicapping conditions. For example, if observers are instructed to pay particular attention to behaviors which are difficult to code and which do not occur frequently, they may inadvertently code more low frequency behaviors than would be expected. This kind of situation contributes to collecting idiosyncratic data which are particularly problematic in pre/post comparisons. Therefore, verification of reliability.

Summary and Conclusions

The Prescott-SRI Child Observation System provides a complex and detailed description of child behaviors. In order to conduct the analysis of baseline data with such a large quantity of child code variables, several data reduction steps were undertaken:

- The total possible child behavior codes (exceeding 780) were reduced to 44 valid codes for initial analysis.
- Child behavior frequency counts were transformed to standardized Z scores based on a non-handicapped sample (which included proportionate representation by handicapping condition). This enabled the development of:
    1. a score which is referenced by a "normal" sample,
    2. an interval measure which better meets the requirements of the proposed data analysis model.

Analysis of the baseline data confirmed expected differences in the Prescott-SRI behavior code frequencies. These differences underscore the intrinsic "treatment" differences between the Head Start and non-Head Start programs.

- Twelve specific child observation codes show significant differences in mean frequency of occurrence for program type.

- Three general dimensions of commonality appear to be present throughout the 12 key variables:
  1. class composition (ratio of children to adults and ratio of non-handicapped children to handicapped children),
  2. closed vs. open structure of the classroom,
  3. degree of social integration and mainstreaming in the classroom.

Further efforts to reduce the large quantity of child code variables by factor analysis produced two selected factors. In combination these two factors account for half of the factor analysis variance, and appear to be highly related to the goal of assessing classroom integration.

In order to confirm reliability estimates for this measure Dr. Elizabeth Prescott was contacted directly to discuss strategies for establishing and improving interrater reliability. Difficulties in establishing interrater reliability include the individual variances of observers, the extent of low incidence behavior or complex codes they are exposed to (and thus can practice on), synchronization of the beepers designating 12-second intervals, and situational sensitivity to certain behavior codes. In order to establish reliability for field data collection conditions and to improve interrater reliabilities, special steps will be taken:

- Strict training standards (.75 observer reliability) will be adhered to.
- All field staff will be trained in the Prescott-SRI which will enable more "intra-staff consultation" on how certain complex behaviors should be coded.
- A subsample of 50 children will have observations by two observers for purposes of estimating interrater reliability under field conditions:
  1. beepers will be matched for accuracy of 12-second intervals in order to insure paired observations at idential (plus or minus two seconds) times,
  2. reliability calculations will be conducted on all key child code variables in order to determine if certain ones are more highly subject to reliability variances than other variables.

5

WITHIN GROUP ANALYSIS

There are two overriding analysis strategies which will be used in the conduct of the final data analysis: between groups and within groups. Each analysis strategy is designed to assess certain statistical differences. The analysis procedures for between groups is designed to identify differences in outcome measures between the Head Start, non-Head Start and (when appropriate) the non-served groups. Since any differences identified between groups on posttest scores could be due to preexisting group differences, it is necessary to examine pretest scores for evidence of such differences. Where pretest differences exist (family income levels for example) statistical controls are necessary to equate the groups. A larger portion of this interim technical report has been organized to identify any of these pretest differences and to specify which variables the groups must be statistically equated on.

The procedures designed for within group analysis will take one of two general approaches. One approach assess differences between pretest and posttest conditions and identifies specific variables which appear to contribute most substantially to these changes. The major thrust of this approach would be to utilize the convention of path analysis to describe and portray causal relationships between certain variables and the outcome measure (growth and development of the child). The second approach would be to create a nominal scale variable, identifying those children who showed "treatment gains" (gainers) and those children who showed non-treatment related gains, or even losses (no gainers). A series of discriminant functions, specific to handicapping condition, would then identify individual variables of significance.

Most of the variables used in the study were selected because they were either thought to accurately represent probable differences between groups, or because previous research has shown them to be good indicators of the relationship of that variable with growth and development. Since analysis of pretest data can only identify existing pretest differences, comprehensive within group analyses are to be conducted for each group (Head Start, non-Head Start and non-served). In addition to providing a baseline description of pretest levels for each variable, this will allow for a description of those variables which ultimately contribute to changes in outcome measures. Because the nature of the within group analysis strategy is directed towards an examination of all probable variables, the data reduction effort required for the between group analysis is not necessary.

The exact scope of the within group analysis efforts is detailed in the Analysis Plan. The general thrust of the analysis, however, is to describe the relationships of the selected variables and their independent as well as joint effects on the outcome measures.

6

SUMMARY AND RECOMMENDATIONS

The major purpose of this report has been to 1) review the validity and/or psychometric properties of several study data collection instruments, 2) to review baseline data for the purpose of establishing parameters which must be considered in proposed comparative analyses, and 3) to reduce available study data to an efficient set of variables for analytic purposes. The results of investigations directed toward meeting these objectives are presented below. As results are presented, recommendations are made which relate study findings to proposed baseline posttest analyses. Unless otherwise directed by ACYF, these recommendations will be strictly followed in all between group Phase II analyses and in the amount of posttest data collection activities.

Study Instrumentation Issues

1. Validity of Alpern-Boll Developmental Data

Findings

Using the Learning Accomplishment Profile as a point of reference it was found that correlations between several Alpern-Boll/LAP-D subscale areas were of sufficient magnitude, taking into account the restriction of range issue, to conclude that parent reported information was sufficiently equivalent for analytical purposes in specific areas. The relevant Alpern-Boll subscales include the Academic and Communication subscales. Because there is no LAP-D equivalent for the Alpern-Boll Self-Help subscale, there was no way to validate this particular information set (pages 3.5 - 3.8).

However, the Physical Development subscale of the Alpern-Boll did not correlate well with either the Fine or Gross Motor subscales of the LAP-D. Lack of correlation is not a function of extreme case scores. This fact raises serious questions about the equivalence of Alpern-Boll data in this area.

Recommendations

- Accept the Alpern-Boll Academic and Language subscales as valid measures of functional development.
- Accept Alpern-Boll Self-Help subscale as a measure of functional development despite lack of appropriate data to establish validity.
- Continue additional analysis of the Alpern-Boll Physical Development subscale including:
    - .. Correlation between Physical Development subscale and total score of LAP-D Fine and Gross Motor subscales.
    - .. Correlation between Physical Development subscale and average score of LAP-D Fine and Gross Motor subscales.
    - .. Correlation between posttest subscale scores.

If these analyses do not result in increased correlation coefficients, it is recommended further review of possible sources of measurement error be explored to determine why there is so little correspondence between these assessments. It is not recommended at this time that the Physical Development subscale be excluded from baseline/posttest analysis.

2. Validity of Alpern-Boll Short Form as an Alternative to the Alpern-Boll Long Form

Findings

Using the Alpern-Boll Long Form as a point of reference, it was found that correlations between three subscales were of sufficient magnitude, taking into account restriction of range issues, to accept these subscales as alternative data sources in the event the Alpern-Boll Long Form could not be completed for certain children during the posttest data collection effort. The relevant subscales include Academic Age, Communication Age, and the I.Q. Equivalency score (pages 3.8 - 3.10).

However, the correlations between the remaining subscales are too low for the Short Form to be considered a valid alternative to the Long Form.

Recommendation

Continue with plans to use the Alpern-Boll Start Form in the event of parent attrition from the posttest sample. However, a second validation study involving a subsample of 100 cases will be undertaken during the posttest to ascertain whether baseline results were a function of teacher unfamiliarity with sample children. Pending results of this second validation study, it is recommended that baseline/posttest analysis only utilize data from the Academic, Communication, and I.Q. Equivalency Scales.

3. Utility of Applied Management Sciences' Parent Scale for "Assessing Attitudes Toward Mainstreaming"

Findings

Inter-item correlations on the nine-item Parent Attitude Scale are very low while item-total correlations are relatively high. This suggests that the measurement domain of each item has little overlap with other items, and that each item accounts for some unique variance to the total scale score. Further, item total correlations are relatively stable when possible intervening variables are controlled for. (Pages 3.12 - 3.15)

Recommendation

The Parent Attitude Scale concerning the value of mainstreaming should be used in its entirety for baseline/posttest comparisons and that it is appropriate to treat total scale score as a unique variable. Individual item analysis should also be undertaken to assess attitude change.

4. Utility of Applied Management Sciences' Teacher Scales for "Assessing Attitudes Toward Mainstreaming"

Findings

The two components of the Applied Management Sciences' Teacher Attitude Scale showed high component-total score correlations, but the inter-component correlation is more modest. While there is considerable overlap between the measurement domains of the component scales, there is sufficient residual variation to warrant consideration of the two component scales as distinct measures. (Pages 3.15 - 3.17)

Recommendation

Baseline/posttest analysis should treat each component of Applied Management Sciences' Teacher Attitude Scale as a separate variable set for analysis.

Study Group Difference Issues

1. Characteristics of the Sample Children

Findings

The distribution of handicaps in the Head Start and non-Head Start samples differ considerably. The Head Start sample has proportionately more speech-impaired and health-impaired children. The non-Head Start sample has proportionately more mentally retarded children. (Page 4.6)

Recommendation

Baseline/posttest comparisons should be conducted by handicapping condition.

Findings

The distribution of male and females in the Head Start and non-Head Start study samples are comparable. However, a potential sex role bias was identified with respect to certain handicapping conditions - boys are far more likely to be identified as emotionally disturbed or speech impaired than girls; girls are relatively more likely to be identified as learning disabled.

Recommendation

Further analysis should be conducted to determine whether potential sex role bias maintains across study groups. If so, then sex of a child will be treated as a covariate only for those between-and-within group analyses involving the above-mentioned handicaps. If potential sex role biases are not evidenced across study groups, treatment of gender as a covariate will be determined on a case-by-case basis.

Findings

Variables related to birth order, presence or absence of previous program enrollment and duration of previous program enrollment do not significantly differentiate the Head Start and non-Head Start study groups. (Page 4.10)

Recommendation

These three child-specific variables should not be considered as covariates for between-group comparisons. However, prior program enrollment variables should be retained for within-group analyses.

Findings

The available samples of children diagnosed as blind, visually impaired, deaf, and hearing impaired are small. Further, the Head Start and non-Head Start samples in each of these categories show marked differences in terms of chronological age and handicap severity. (Pages 4.13 - 4.17)

Recommendation

Analyses involving these four handicaps should be limited to descriptive information of pretest/posttest differences within groups. No attempt should be made to statistically estimate "treatment effects" for between group analyses. Further, no attempt should be made to statistically identify causal factors related to functional development for within-group analyses.

Findings

Samples of children diagnosed as physically handicapped, health or developmentally impaired, and mentally retarded are of sufficient size for useful between-groups comparisons. The samples are also comparable with respect to chronological age. However, degree of handicap severity appears substantially different.

Recommendation

Between group comparisons for these samples should consider degree of handicap severity as a covariate.

Findings

Children diagnosed as speech impaired, learning disabled, and emotionally disturbed have sufficient representation in the respective samples to permit between-group analysis. Additionally, these samples are quite comparable in terms of chronological age and handicap severity. (Pages 4.22 - 4.24)

Recommendation

Between-group analyses for these samples need not consider chronological age or handicap severity as outcome covariates (pending additional analysis).

Findings

Comparability of ratings of severity level between the Head Start and non-Head Start samples are suspect. Head Start staff appear to overstate severity of handicap. (Pages 4.25 - 4.26)

Recommendation

An alternate measure of handicap severity must be established. We recommend observer judgments secured from field staff utilizing common judgment criteria across all programs and handicapping conditions. Other strategies, such as adjusting existing ratings by a factor reflecting differential rating tendencies of Head Start and non-Head Start staff or verifying severity from diagnostic records, are also possible. However, while the former approach may further confound severity level ratings, the latter approach is not economically feasible without additional funding from ACYF.

2. Characteristics of the Child's Family

Findings

Characteristics of the families in each of the study samples are markedly different. The non-Head Start sample evidences higher income levels, educational levels, occupational levels, and smaller family structures. A discriminant analysis including these variables, however, revealed that family income, level of mother and father educational attainment, and number of other children best differentiate the two study groups. (Pages 4.34 - 4.37)

Recommendation

For between-group analyses, the four variables mentioned above should be retained for preliminary analyses prior to final selection of variables which should be treated as covariates with outcome measures. For within-group analyses there is sufficient heterogeneity with respect to all family characteristic variables that each should be retained for analytical purposes.

3. Program Differences

Findings

Head Start and non-Head Start programs are significantly different with respect to budgets, staff characteristics and attitudes, curriculum resources, perceived training needs, and enrollment ratios of handicapped to non-handicapped children. (Pages 4.43 - 4.70)

Recommendation

For purposes of between-group analysis these differences will be considered as elements of the "treatment conditions" for each program. No statistical corrections will be made to equalize the groups on these differences. However, each of the above variables will be considered for within-group analyses.

4. Prescott-SRI Child Observation System

Findings

The detailed and complex data provided by this measure requires reduction in quantity and modification of format. (Pages 4.74 - 4.78)

Recommendation

A total of 44 child behavior codes (out of 780 possible codes) will be selected and retained for use in the initial analysis of pretest-posttest data, including twelve key behavior code variables which show differences by program type.

Frequency counts for each selected child behavior code will be transformed into standardized z scores for comparability with a non-handicapped sample, with other behavior codes, and to better meet the statistical needs of the analysis model.

Two factors of the eight identified factors will be used as measures of classroom integration in analysis to determine the relative affects of this variable on outcome measures.

Findings

Reliability variances seriously affect the quality of the observation data. (Pages 4.89 - 4.90)

Recommendation

A subsample of 50 children will receive paired observations in order to verify interrater reliability.

Strict reliability criterion will be adhered to for observer training and field staff will conduct occasional reliability probes for specific difficult-to-code behaviors.

Findings

The reduction of the large quantity of variables available from the Prescott-SRI to a more manageable group of 44, allowed for some common dimensions to be identified; class composition, degree of social integration, and closed vs open classroom structure. The dimension of closed vs open structure of the classroom is not clearly assessed. (Page 4.88)

Recommendation

Use Prescott-SRI summary codes for observer judgments (Likert type scale of 1 to 5) regarding the closed vs open structure of the classroom.

APPENDIX OF TABLES

TABLE A1: SEVERITY LEVEL DESCRIPTORS FOR EACH HANDICAPPING CONDITION

Handicapping Condition	SEVERITY LEVEL			
	Mild	Moderate	Severe	Profound
Hearing Impairment	30-45 decibels: Understands conversational speech at a distance of 3 to 5 feet without too much difficulty in school if talker's voice is faint or if the face is not visible.	45-60 decibels: Conversational speech needs to be loud to be understood and there is considerable difficulty in group and classroom discussion. Language, especially vocabulary, may begin to be limited and deviations of articulation and voice are noted.	60-80 decibels: May hear voice about one foot from the ear, may identify environmental noises and may distinguish vowels but have difficulty with consonants. Voice may show signs of deviation, but speech and language need to be taught.	80 plus decibels: May hear some loud sounds. Speech and language need to be developed through training.
Visual Impairment	Vision impairment is correctable with corrective lenses or medical treatment and does not impede normal functioning	Visual impairment is not totally correctable with corrective lenses and requires surgical or habilitative intervention. Normal visual functioning is impaired and modifications of classroom activities or materials is needed.	Normal visual functioning is substantially impaired and even with intervention requires development of other sensory systems to compensate for the deficiency in the visual system.	Child is legally blind or impaired in the visual channel to a degree precluding the use of
Communication Disorder (Speech Impairment)				
Receptive or Expressive Language Impairment	Delayed 6 months or less	Delayed 6 months to 1 year	Delayed one to two years	Delayed more than two years
Articulation Impairment	Speech noticeably defective but readily intellegible	Speech is noticeably defective but intelligible with careful listening	Speech is not readily intelligible without contextual cues	Speech is total unintelligible.
(Stuttering)	Stuttering on less than 2 percent of words; tension scarcely perceptible; very few, if any, disfluencies last as long as a full second; patterns of disfluency simple; no conspicuous associated movements of body, arms, legs, or head.	Stuttering on about 3 to 12 percent of words; consistently noticeable tension; disfluencies average about 2 seconds in duration; a few distracting sounds and facial grimaces; a few distracting associated movements	Stuttering on 12 to 25 percent of words; very conspicuous tension; disfluencies average 3 to 4 seconds in duration; very conspicuous distracting sounds and facial grimaces; very conspicuous distrcting associated movements	So dysfluent that speech is seldom produced more than 1 or 2 words at a time.

TABLE A1: (Continued)

Handicapping Condition	SEVERITY LEVEL			
	Mild	Moderate	Severe	Profound
Health Impaired	The health condition or disease limits the child's participation in classroom activities. Usually medication and/or dietary control assist in maintenance of the near-normal health condition. Some examples are: seizure disorders controlled with medication, heart conditions, anemia.	A moderately health impaired child is one whose health status is subject to change, often quite suddenly and unexpectedly, or will demonstrate no improvement. While at times his handicap may cause minimal problems, at other times it becomes disabling to the point of hospitalization. His disease or condition can thus seriously impact his ability to progress at a scheduled pace and to function independently. Examples include: leukemia, sickle cell anemia, epilepsy, diabetes, muscular dystrophy, heart defects, and asthma.	The child is one who cannot function alone, his/her health status is completely unstable. This child is unable to care for his basic needs. Examples include the uncontrolled diabetic and uncontrolled epileptic.	The child is unable to care for any bodily needs. Medication and/or dietary regulation are more important and take precedent over any educational programming which could be provided. Child may be completely bedridden.
Physical Handicap	Noticably physically impaired but not impeded for normal functioning.	Physical impairment requires prosthetic for normal functioning or normal function is somewhat impaired.	Physical impairment prevents normal functioning such as ambulation or eye-hand function.	Physical impairment prevents all motoric functioning (i.e., quadraplegic).
Learning Disabled, Mentally Retarded, Emotionally Disturbed	A child who is unable to perform skills and activities generally ascribed to his/her age and growth developmental levels. He/she needs assistance with self-held activities (dressing, eating, etc.) that the other children in his class can handle independently.	A child who exhibits significant gaps in functioning when compared with his/her peers in the classroom. Child needs some teacher assistance in most classroom activities and self-help skills.	A child who exhibits great difficulty in functioning in the pre-school classroom. His/her delays do not allow him/her to participate in many group activities with his/her peers. The child requires much individual assistance from the teacher and aide. He/she can participate independently in very few activities. (Head Start probably enrolls very few of these types of children).	A child with this extreme level of involvement will not be found in a Head Start classroom. This level of disability requires home-bound educational programming. Children who fall into this category usually are totally dependent upon adult care. They cannot control bodily functions and have extremely limited abilities related to developing any self-help skills.

TABLE A2: DIAGNOSTIC CRITERIA* FOR REPORTING HANDICAPPED CHILDREN IN HEAD START

BLINDNESS

A child shall be reported as blind when any one of the following exist: (a) child is sightless or who has such limited vision that he/she must rely on hearing and touch as his/her chief means of learning; (b) a determination of legal blindness in the State of residence has been made; (c) central acuity does not exceed 20/200 in in the better eye, with correcting lenses, or whose visual acuity is greater than 20.200, but is accompanied by a limitation in the field of vision such that the widest diameter of the visual field subtends an angle of no greater than 20 degrees.

VISUAL IMPAIRMENT (HANDICAP)

A child shall be reported as visually impaired if central acuity, with corrective lenses, does not exceed 20/70 in either eye, but who is not blind; or whose visual acuity is greater than 20/70, but is accompanied by a limitation in the field of vision such that the widest diameter of visual field subtends an angle of no greater than 140 degrees or who suffers any other loss of visual function that will restrict learning processes, e.g., faulty muscular action. *Not to be included in this category are persons whose vision with eyeglasses is normal or nearly so.*

DEAFNESS

A child shall be reported as deaf when any one of the following exist: (a) his/her hearing is extremely defective so as to be essentially nonfunctional for the ordinary purposes of life; (b) hearing loss is greater than 92 decibels (ANSI 1969) in the better ear; (c) legal determination of deafness in the State of residence.

HEARING IMPAIRMENT (HANDICAP

A child shall be reported as hearing impaired when any one of the following exist: (a) the child has slightly to severely defective hearing, as determined by his/her ability to use residual hearing in daily life, sometimes with the use of a hearing aid; (b) hearing loss from 26-92 decibels (ANSI 1969) in the better ear.

PHYSICAL HANDICAP (ORTHOPEDIC HANDICAP)

A child shall be reported as crippled or with an orthopedic handicap who has a condition which prohibits or impedes normal development of gross or fine motor abilities. Such functioning is impaired as a result of conditions associated with congenital anomalies, accidents, or diseases; these conditions include for example spina bifida, loss of or deformed limbs, burns which cause contractures, cerebal palsy.

*Via OCD-HS Transmittal Notice of 9/11/75: ANNOUNCEMENT OF DIAGNOSTIC CRITERIA FOR REPORTING HANDICAPPED CHILDREN IN HEAD START

TABLE A2: (Continued)

SPEECH IMPAIRMENT (COMMUNICATION DISORDER)

A child shall be reported as speech impaired with such identifiable disorders as receptive and/or expressive language impairment, stuttering, chronic voice disorders, and serious articulation problems affecting social, emotional, and/or educational achievement; and speech and language disorders accompanying conditions of hearing loss, cleft palate, crebal palsy, mental retardation, emotional disturbance, multiple handicapping conditions, and other sensory and health impairments. *This category excludes conditions of a transitional nature consequent to the early developmental processes of the child.*

HEALTH OR DEVELOPMENTAL IMPAIRMENT

These impairments refer to *illnesses of a chronic nature or with prolonged convalescence* including, but not limited to, epilepsy, hemophilia, severe asthma, severe cardiac conditions, severe anemia or malnutrition, diabetes, or neurological disorders.

MENTAL RETARDATION

A child shall be considered mentally retarded who, during the early developmental period, exhibits significant sub-average intellectual functioning accompanied by impairment in adaptive behavior. *In any determination of intellectual functioning using standardized tests that lack adequate norms for all racial/ethnic groups at the preschool age, adequate consideration should be given to cultural influences as well as age and developmental level (i.e., finding of a low I.Q. is never by itself sufficient to make the diagnosis of mental retardation).*

SERIOUS EMOTIONAL DISTURBANCE

A child shall be considered seriously emotionally disturbed who is identified by professionally qualified personnel (psychologist or psychiatrist) as requiring special services. This definition would include but not be limited to the following conditions: dangerously aggressive towards others, self-destructive, severely withdrawn and non-communicative, hyperactive to the extent that it affects adaptive behavior, severely anxious, depressed or phobic, psychotic or autistic.

SPECIFIC LEARNING DISABILITIES

Children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and development aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, of emotional disturbance, or of environmental disadvantage. *For preschool children, precursor functions to understanding and using language spoken or written, and computational or reasoning abilities are included.* (Professionals considered qualified to make this diagnosis are physicians and psychologists with evidence of special training in the diagnosis of learning disabilities and at least Master's degree level special educators with evidence of special training in the diagnosis of learning disabilities.)

TABLE A3: TYPES OF PREVIOUS PROGRAM EXPERIENCE

Type of Previous Program Experience	Program Type		
	Head Start % of Total	Non-Head Start % of Total	Non-Served % of Total
TOTAL	100.0 (N=429)	100.0 (N=353)	100.0 (N=154)
None	75.3 (N=323)	68.6 (N=242)	87.0 (N=136)
Home-based, Head Start	1.6 (N=7)	2.0 (N=7)	*
Home-based, Other ______________	0.9 (N=4)	2.8 (N=10)	1.3 (N=2)
Infant stimulation program	0.9 (N=4)	5.1 (N=18)	1.3 (N=2)
Easter Seal Treatment Center	1.4 (N=6)	2.8 (N=10)	1.3 (N=2)
Association for Retarded Children (center-based)	1.4 (N=6)	1.1 (N=4)	1.3 (N=2)
BEH First Chance Project	*	0.3 (N=1)	*
Public School Preschool (center-based)	1.9 (N=8)	0.6 (N=2)	*
Other	17.0 (N=73)	19.0 (N=67)	9.7 (N=15)

TABLE A4: TYPES OF ACTIVITIES PARENTS PARTICIPATE IN AT CENTERS

Types of Activities	Program Type Head Start % of Total	 Non-Head Start % of Total
TOTAL	100.0 (N=429)	100.0 (N=353)
None	35.0 (N=150)	32.6 (N=115)
Transportation	12.6 (N=54)	24.9 (N=88)
Train other parents	4.7 (N=20)	4.5 (N=16)
Outreach and recruitment	4.0 (N=17)	4.0 (N=14)
Developing resource file	1.6 (N=7)	1.4 (N=5)
Develop goals for parent activities	7.9 (N=34)	9.1 (N=32)
Contact with other services	5.1 (N=22)	4.2 (N=15)
Donate materials	25.6 (N=110)	19.0 (N=67)
Involved with center functions	39.6 (N=170)	15.3 (N=54)
Other	32.6 (N=140)	40.2 (N=142)

TABLE A5: SUMMARY CODING FOR SRI

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SUMMARY CODING

A. PROGRAM STRUCTURE ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. Free Choice
2. Routine of the Center: snack, cleanup, toileting, transition
3. Teacher-directed individual activity
4. Teacher-directed group activity
5. No code applies for 75% (15 minutes) of the observation period

B. PARTICIPATION/INVOLVEMENT ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. Consistently uninvolved, predominantly listless, apathetic behavior; generally outside activities, a non-participant.
2. Often uninvolved, seldom participates in activities; seems disinterested, interest level minimal.
3. Sometimes outside activities; not highly involved but generally participating.
4. Generally interested and attentive to activities; majority of the observation period.
5. Consistently involved, engrossed and/or highly interested in activities.

C. DOMINANCE/SUBMISSIVENESS ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. Submits to other children, consistently follows along and rarely asserts self.
2. Generally submits to other children, and occasionally states interests but does not maintain position.
3. Interacts as equal with other children, asserts wants and accepts others' ideas.
4. Generally dominant, sometimes accepts other children's ideas, exerts leadership.
5. Consistently dominates other children and groups.
6. Interactions with other children are rare or did not occur in this observation period.

D. LEVEL OF INTERACTION WITH ADULTS ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. Generally avoids adults, stays on outside of groups where adult is present, does not attend when approached, ignores adults.
2. Sometimes avoids or ignores adults, generally attends and/or responds appropriately to adult approaches.
3. Normal interaction level; neither constantly seeks out adults, nor ignores adults, always attends when adults initiate interaction.
4. Sometimes follows adults, seeks out adults for comfort/praise/attention.
5. Clings to adults, seeks attention, praise, help or comfort for much of the observation period.
6. Unable to make a judgment due to lack of adult availability or adult initiation of interactions.

E. AFFECT ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. Considerably distressed, extended crying or general overt unhappiness.
2. Moderately distressed or unhappy, somber mood with little or no positive emotion.
3. Generally neutral tone, minimal distress.
4. Positive affective tone, moderate pleasure.
5. Great pleasure, generally highly enthusiastic, smiles, laughs.

F. HOSTILITY ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. No hostile acts
2. Occasional hostile acts
3. Frequent hostile acts

TABLE A5: (Continued)

G. INVOLVEMENT WITH OTHER CHILDREN ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. General avoidance of other children, ignores others when approached.
2. Alone most of the period, responds when approached.
3. Sometimes with other children, and sometimes alone, appears comfortable in either situation.
4. Interacts comfortably with other children the majority of the period.
5. Constantly seeks acceptance, clings to other children.

H. INVOLVEMENT WITH OTHER HANDICAPPED CHILDREN ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. No other handicapped children in the classroom.
2. Interacts almost exclusively with non-handicapped children even though other handicapped children are available.
3. Appears comfortable interacting with either handicapped or non-handicapped children.
4. Seems to prefer to interact with other handicapped children, but will interact with non-handicapped children if approached.
5. Interacts exclusively with other handicapped children.
6. No interaction.

I. ETHNIC ORIGIN ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. American Indian or Alaskan Native.
2. Asian or Pacific Islander.
3. Black, not of Hispanic Origin.
4. Hispanic.
5. White, not of Hispanic origin.

J. CHOICE PERMITTED CHILDREN IN THE INITIATION AND TERMINATION OF ACTIVITIES. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

1. In general, children have a great deal of freedom in selecting and terminating activities.
2. Children have some freedom in selecting and terminating activities.
3. Although children were sometimes permitted to choose or terminate activities, there was an equal amount of structure imposed by the teacher.
4. In general children were involved mostly in activities which were teacher directed and/or initiated.
5. Children were only involved in activities which were teacher directed and/or initiated.

K. Teacher Code 1-10. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

L. ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

TABLE A.6: CODE DISPLAY SHEET FOR CHILD ACTIVITY CODES ON THE SRI

CHILD OBSERVATION SYSTEM
CODE DISPLAY SHEET

INTEGRATES	THRUSTS/INITIATES	RECEIVES	DEFENDS/RESPONDS
I1 Monitors environment (looks, watches). Child's attention must be on something other than what he is doing; never instruct discussion unless it is very evident child is not paying attention.	T1a Does nothing, wanders T2a-E-NA just wandering; T2a-A-O teacher imposed waiting T1b Moves with purpose	R1 Receives orders or minor behavioral corrections w/o an explanation; Task or social order Requires immediate response	1 No response
I2a Maintains passive-attention activity Only focus child listening to story, record I2b Maintains open-ended, expressive activity-dancing alone I2c Maintains closed, structured activity games w/rules; teacher directed; snack, clean-up, reading to self	T2a Selects activity alone T2b Selects activity with others; suggests new or different activity; asks to join. Goes w/group to activity; asks others or goes w/others to new activity other children present	R2 Receives request/offer to play or share; help-must be verbal Child wants to share w/F.C. F.C. must receive verbal request to play for R2--otherwise its R7b (neutral) don't guess	2 Avoids, withdraws Movement may be voluntary or involuntary
I3a Asks for assistance, help with task; tries but can't; info on the task, i.e., where to put this block? I3b Quits activity after difficulty Gives up I3c Reacts with anger to difficulty	T3a Asks for information, help before task begins T3b Asks for permission to share materials, asks for turn	R3 Receives information/help--task facilitation; what T says; can happen anywhere in task; T sets up agenda for activity-can happen any where in task; way of making activity clearer; feedback; usually from A	3 Cries, whines (D3)
I4a Considers, contemplates, tinkers, studies, examines I4b Adds a different prop or new idea; must be different from previous frame I4c Sees pattern, gives structure; solves problem first time; solves a problem; first time discovery must verbalize	T4 Gives opinions, preferences, information, comments; non-task? task ?'s volunteers info; verbal friendly training T4ng Threats, name calling, no phys.	R4 Receives general comments, questions; not on task; verbal playful teasing R4ng receives demeaning comments, name calling, sarcasm	4 Refuses to comply (D4)
I5a Offers sympathy, comfort first time it happens; must be distress evident-N I5b Shares, helps, offers affection other child does not have to be in distress; invites to join	T5a Asks for comfort, reassurance N-follows NA T5b Asks for attention, recognition; expresses pride - usually verbal boastful; must be clear; voice, physical stance-compares	R5a Receives comfort, affection N R5b Receives praise - praise related to task on proper or social beh. Thank you	5 Defends rights, asserts ownership (D5)
I6a Participates in group activity--passive attention Sesame Street I6b Participates in group activity--open, expressive I6c Participates in group activity--closed, structured, eating snack w/others; clean-up; discussion; puzzle table	T6a States rules; tattles - center or social rules T6b Gives orders or directs others in task	R6a Receives rules, corrections with explanation R6b Receives threats, discipline restraint; adult discipline; threats from C. R6b-N Receives physical punishment	6 Hostilely asserts rights; anger (D6) Really upset - frantic, angry
I7-Ng Participates in hostile exchange. Mutual - N I7 Participates in equal playful exchanges. Focus on quality of joy being experienced-N-simultaneous	T7a Intrudes unintentionally, imply physical things happening T7b Intrudes playfully, neutral; physical T7b-Ng Intrudes hostilely-physical	R7a Receives unintentional intrusion or disruption R7b Receives playful intrusion, neutral-fire drill R7b-N Receives hostile intrusion R7b, T7b if occur twice, on third frame code R7bNg, T7bNg	7 Active, appropriate response
		R8a Receives rejection, refusal (sad) R8b Experiences accident from environment R8b-E-NA-3 D3-E-NA (second frame)	

AS Attends to self TT Temper tantrum NC Not clear OL Other language RP Role play Ng Negative	I5a R5a I7 I7-Ng	N in continuity	No D1, D2 or D7 D3 from unknown intrusion D3 → 6

APPENDIX I

DATA COLLECTION PROCEDURES

APPENDIX I

Data Collection Procedures

This appendix describes the methods and procedures used in collecting Phase II baseline data. Specifically, the areas of interviewer selection, field staff training, data collection procedures, and data base management are covered.

Interviewer Selection

Interviewers were recruited primarily from the Washington, D.C. metropolitan area. More than 600 potential field interviewers were screened using the following primary criteria:

- relevant academic qualifications in special or early childhood education;
- number of years of classroom teaching experience;
- experience in administration of individual assessments to young handicapped children;
- experience in classroom observation using a standardized recording instrument.

Secondary criteria included:

- previous data collection experience
- direct experience with Head Start
- Spanish-speaking capability.

The second step in the hiring process was a personal interview with each candidate whose qualifications met at least two of the above criteria. The personal interview served a dual purpose: (1) to explain the scope and purpose of the study and to confirm that the applicant had an understanding of the requirements of the field interviewer position, and (2) to be sure that the experiences of the applicant were consistent with the skills required by data collection activities.

Team Structure

Forty-nine interviewers were hired for 11 teams of five persons each. In addition, six regular employees of Applied Management Sciences served as team leaders, and the remaining team leader positions were filled by field staff who had collected data during Phase I of the study.

Of the 55 field interviews, over two-thirds had advanced degrees in early childhood or special education and/or direct classroom experience with young handicapped children.

In identifying a sub-set of this group for more specialized training in the administration of an individual child assessment instrument, the *Learning Accomplishment Profile--Diagnostic Edition (LAP-D)* and in the *Prescott-SRI Child Observation System*, additional criteria were considered. For the LAP-D trainees, it was important that the individual had had experience in administering standardized assessments to young children. For those field staff selected to be trained in the *Prescott-SRI*, a first consideration was whether the individual had had experience in observing and coding child behavior in a classroom setting.[1/] The second selection factor was whether the interviewer was a Montessori teacher.

[1/] Although personnel from SRI International indicated that these factors had not been useful in predicing success in the use of the Prescott-SRI Child Observation System, Applied Management Sciences found that individuals with previous classroom observation experience performed very successfully in training as well as field observation activities.

Montessori training emphasizes careful observation of children's behavior within the classroom; and, therefore, these teachers would already be sensitized to observing children in a classroom setting.

Field Staff Training

The purpose of this section is to describe the field training activities in which the Phase II interviewers participated and the extent of their involvement. As much as possible the training program was designed to: (1) simulate the actual data collection experience anticipated in the field and (2) insure that the trainees developed the competencies necessary for the accurate and reliable administration of the data collection instruments.

The majority of the training program was conducted by the project staff, however in cases where training specifically focused on the administration of some of the standardized test protocol, e.g., the Learning Accomplishment Profile-Diagnostic Edition (LAP-D), the Prescott-SRI Child Observation System, and the Alpern-Boll Developmental Profile, specialists from the Chapel Hill Training Project, SRI International, and the Fairfax County Public School system were used.

In addition to utilizing the expertise of outside consultants for training, several of the local Head Start programs which were not included in the Phase II study sample, provided their facilities to afford trainees an opportunity for practicum experiences and classroom observations.

The intensive training program was divided into the following target components:

- Component I - Core Training
- Component II - Administration of the LAP-D
- Component III - Administration of the Prescott-SRI Child Observation System

The various training activities which occurred within each of these components will be described in the sections that follow.

Component I: Core Training

The core training session was organized into fifteen instructional modules designed to provide (1) an indepth orientation to the overall data collection process and (2) information on the administration of the data collection instruments whose primary respondents were teachers, parents or program directors.

Each module was structured to be conducted primarily as a workshop,* however within this format included extensive use of: (1) lecture presentations; (2) role playing and simulation exercises, (3) practicum experiences; and (4) small group discussions. In addition, an interviewers' training manual was developed to assist trainees in the assimilation and synthesis of information presented during each module.

The corpus of information presented to the interviewers within the orientation modular sessions focused on:

- Interviewer roles and responsibilities
- Phase II study design/purpose/methodology
- Nature of Head Start programs and background information on the handicapped effort
- Travel logistics and expense reporting
- Behavior observation and interviewing techniques

Concurrently, emphasis was placed on: (1) developing the interviewer's objectivity of approach to all respondents; (2) maintaining respondent confidentiality; and (3) insuring regular examination of all data collection forms for accuracy and completeness. A sample training agenda appears at the end of this section.

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*Each module was designed to be conducted as one unit. However, on occasion the information was expanded over a number of the sessions depending on the needs of the group and/or time available to the project trainers.

In the subsequent instruction modules, interviewers were provided training in the administration of the core data collection instruments. The core assessment instruments were specifically those Phase II tests/questionnaires whose focal respondents were either parents, teachers or program directors. These included the following:

- Parent Assessment Instruments
  Schaefer Parent Inventory
  Phase II Parent Interview Schedule
  High Scope Home Environment Scale
  Alpern-Boll Developmental Profile
- Teacher Assessment Instruments
  Schaefer Teacher Inventory I
  Schaefer Teacher Perception of the Environment Inventory
  Phase II Teacher Interview Schedule
  California Preschool Social Competency Scale
- Case Background Data Profile
- Program Director Assessment Instruments
  Phase II Primary Data Schedule
  Case Follow-Up Schedule

The training activities which occurred within each of these subsequent modules consisted of providing the field interviewers with (1) theoretical information and techniques relevant to the successful administration of each core assessment instrument and (2) practicuum experiences in a variety of simulated environments (e.g., school, home, etc.).

All core training activities were conducted by the project staff in conjunction with a child development specialist from the Fairfax County Public School system. The specialist provided a four hour indepth seminar in the administration of the Alpern-Boll Developmental Profile which focused particularly on the test's: (1) purpose and methodology, (2) varied administration techniques, and (3) scoring procedures and interpretation.

Upon successful completion of all core training activities, interviewers were divided into teams consisting of one team leader and four team members. The number of team members was modified depending upon the number of alternate programs at any given site. In addition, interviewers who were fluent in Spanish were transferred from one team to another at a specific site as needed.

Each interviewing team was structured so that at least two members were trained in either the administration of the Prescott-SRI-Child Observation System or LAP-D. However, all interviewers were trained in the administration of the core data collection instruments.

Component II: Administration of LAP-D

The interviewer's training in the administration of the Learning Accomplishment Profile - Diagnostic Edition was implemented by a technical assistant and training specialist from the Chapel Hill Outreach Project. The specialist conducted an intensive six hour workshop during which the theory and practice of the LAP-D administration were dealt with in detail. In addition to a thorough explanation of the test's construction, purpose, foundations, and procedures for administration, the participants, viewed a videotape of an actual test administration. Further, throughout the training the importance of strict adherence to the procedures specified in the LAP-D examiner's manual was particularly emphasized.

Upon the completion of the LAP-D training workshop, interviewers were required to successfully administer, (establish ceilings in each sub-scale) two assessments prior to the commencement of data collection activities in the field. This procedure was stipulated in order to assess whether or not each participant had mastered all of the competencies necessary for LAP-D certification.

The certification procedure was standardized for all interviewers. Each participant was randomly assigned two children for testing. The children were between the ages of 3-5 years and were enrolled in a local Head Start program which was not included in the study. These children were selected for assessment because: 1) their characteristics closely matched those of the Head Start population included in the Phase II study sample; and 2) these preliminary assessments would as much as possible simulate actual test conditions in the field.

Component III: Administration of the Prescott-SRI Child Observation System

The interviewers' training in the administration of the Prescott-SRI Child Observation System was implemented by a Prescott-SRI trainer/consultant from SRI International. Seven days of training were scheduled culminating with a three-hour reliability test, designed to measure trainer-trainee reliability.

Throughout the seven day session several training techniques were used to familiarize the trainees with the child codes and the systematic observation procedures. After all components and data collection procedures of the Prescott-SRI had been discussed and the individual codes defined, trainees were given an initial assignment to develop illustrations of each child code. This provided a common foundation for discussion on what was or was not included as a coded behavior. In addition to actual practice sessions in local Head Start programs, video-tape segments were provided to simulate classroom situations and vignettes of classroom interactions were read to trainees to practice coding. A training agenda is included at the end of this section.

Periodically during the training sessions reliability checks were conducted. Segments of a video tape were played while trainees coded. After coding, correct codes were given by the trainers and discrepancies between trainer and trainee coding were discussed.

Since each field team required two Prescott-SRI observers and only 12 trainees could be accommodated in each session, Applied Management Sciences conducted two training sessions. Twenty-three interviewers who met the .75 trainer/trainee reliability criteria were trained over a 14 day interval. Only those individuals who met these criteria were certified to collect data using the Prescott-SRI Child Observation System.

TRAINING AGENDAS

Training Session Agenda

Fall 1977

Prescott-SRI Child Observation System

Day 1

8:30 a.m.	• Introductions • Introduction to the observation system • Discussion of definitions
12:00 noon	Lunch
1:00 p.m.	• Discussion of definitions • Coding practice (vignettes)
4:30 p.m.	• Assign homework • Dismissal

Day 2

8:30 a.m.	• Coding practice • Quiz on codes • Feedback on quiz • Warm-up vignette • Code tapes
12:00 noon	Lunch
1:00 p.m.	• Code tapes • Read and discuss Summary Coding, I.D. information, time start and stop • Discuss editing and procedures for filling out booklet
4:30 p.m.	• Assign homework • Assign centers/practice observing • Dismissal

Day 3

8:30 a.m.	• Observe in centers • Discuss problems • Discuss homework
12:00 noon	Lunch
1:00 p.m.	• Code tapes
4:30 p.m.	• Assign homework • Dismissal

Day 4

8:30 p.m.	• Observe in centers • discuss problems • discuss homework
12:00 noon	Lunch
1:00 p.m.	• Code tapes
4:30 p.m.	• Assign homework • Dismissal

Day 5

8:30 a.m.	• Observe in centers • Discuss problems • Discuss homework
12:00 noon	Lunch
1:00 p.m.	• Code tapes • Reliability tape
4:30 p.m.	• Assign homework • Dismissal

Day 6

8:30 a.m.	• Feedback on reliability tape • Discuss homework • Code tapes
12:00 noon	Lunch
1:00 p.m.	• Reliability tapes
4:30 p.m.	• Dismissal

Day 7

8:30 a.m.	• Feedback on reliability
12:00 noon	Lunch
1:00 p.m.	• Procedures and Logistics

CORE INSTRUMENTS TRAINING SCHEDULE

Monday - October 3

10:00 a.m. - 12:30 p.m.	
Introductions and Welcome	Martin Bloom Steve Frankel
*Staff Roles	Ron Vogel
Study-Design/Methodology/Purpose	Ron Vogel
LUNCH	
1:30 p.m. - 4:30 p.m.	
Role of Interviewers	Ron Vogel
Travel Logistics/Arrangements	Suzanne Thouvenel Sidonie Davis
Travel Reimbursement	Tom Gant
Interviewer's Introduction (names)	John Rader
Disbursement of Training Packets	Sidonie Davis
Assignments for Tuesday	John Rader Sidonie Davis

Tuesday - October 4

9:00 a.m.	
Administrative Details	
9:30 a.m. - 12:00 noon	
Break into two groups (Parent Instruments)	
Group (A) - Alpern-Boll	John Rader
Group (B) - Schaefer, Applied Management Sciences Parent, Highscope	Sidonie Davis
LUNCH	
1:30 p.m.	
Groups Reverse	John Rader Sidonie Davis
4:00 p.m.	
California Preschool Instrument	Suzanne Thouvenelle

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*Applied Management Sciences staff who are traveling begin training at this point.

Wednesday - October 5

9:00 a.m.	
Administrative Details	(Total Group)
9:30 a.m.	
Primary Data Schedule	John Rader Sidonie Davis
10:15 a.m.	
Break into Small Groups	
Schaefer Teacher Instruments	John Rader
Phase II Teacher, Case Background Data Profile	Sidonie Davis
LUNCH	
1:30 p.m.	
Reverse groups	John Rader Sidonie Davis
3:30 p.m.	
Case Follow-Up Instrument	Suzanne Thouvenelle
4:30 p.m.	
Administrative Details	(Total Group)

Thursday - October 6

9:00 a.m.	
Administrative Details, assignments	(Total Group)
9:30 a.m.	
Continuation of Alpern-Boll	Mina Vogel
LUNCH	
1:30 p.m.	
Simulation/Role Playing for:	
Alpern-Boll (Group A)	John Rader
Parent Instruments (Group B)	Sidonie Davis
4:30 p.m.	
Administrative Details, assignments	(Total Group)

Friday - October 7

9:00 a.m.

Administrative Details . . . .

9:30 a.m.

Simulation/Role Playing/Entire Battery . . . . . . John Rader
Sidonie Davis

LUNCH

1:30 p.m. - 4:30 p.m.

Wrap-up Final Details . . . . John Rader
Sidonie Davis

Editing and Verification

Since the conclusions drawn from any statistical analysis are only usable if the data on which they are based are accurate, the process of editing and verifying all elements of the data base is critical. Applied Management Sciences, Inc. recognizes this requirement and has exercised extreme care that all data, both test scores and demographic classifications, were verified for accuracy.

This process of checking for clerical and technical accuracy began with the team leader whose primary responsibility was to supervise team members in completing all elements of each test form, questionnaire or observation schedule. As material was returned to Applied Management Sciences at the end of each week, each package of data was checked to verify that all respondent and program codes were properly recorded and that the correct number of forms were completed for each data set. This initial editing process permitted resolution of errors while interviewers were still in the field.

Before any forms were sent out for keypunching and key verification they were manually edited by the on-site project staff, and checked for consistency, missing data and clarity of responses. Additionally, all open-ended responses were categorized and coded. After keypunching, each data set was edited by a computerized program which verified that the numeric data was within specified ranges, that items designated as "step" items were in fact left blank when appropriate, and that the respondent and program codes that were punched were valid codes. This detailed procedure of editing assured that the data base on which the analysis was conducted was free of all clerical errors.

After the Prescott-SRI Child Observation booklets were returned to Applied Management Sciences, each was manually edited to assure that: (1) there were no stray markings; (2) the circles were at least 3/4 completed and; (3) all identification data were complete.

This was a long arduous process, since data for the Prescott-SRI was recorded for optical scanning and special "Projectachrome" pens produced by Eberhard Faber, Inc., had to be used. Liquid bleach was the only eradicator which was effective in removing errors or stray markings.

When manual editing was completed the booklets were shipped to Stanford Research Instit[illegible] Menlo Park, California. Here the booklets were manually checked again and then shipped for optical scanning and scoring to Intran Corporation in Minneapolis, Minnesota. The resultant data tape was shipped from Intran to SRI International for a machine edit check and then forwarded to Applied Management Sciences. This entire process took approximately six weeks.

APPENDIX II

INSTRUMENTS

PHASE II PRIMARY DATA SCHEDULE

Phase II Primary Data Schedule

(1)

21-22 = "01"

1. WHAT IS THE TOTAL NUMBER OF PRESCHOOL CHILDREN CURRENTLY ENROLLED IN YOUR PROGRAM?

23-26 ☐☐☐☐

1a. TOTAL NUMBER OF HANDICAPPED CHILDREN?

27-29 ☐☐☐

2. GENERALLY, WHAT IS THE RATIO OF HANDICAPPED CHILDREN TO NON-HANDICAPPED CHILDREN?

30-31 ☐☐

3. HOW LONG HAVE YOU BEEN SERVING HANDICAPPED PRESCHOOLERS?

32

1 less than one year
2 1-2 years
3 3-4 years
4 5-7 years
5 8-10 years
6 over 10 years

33

4. DO YOU SERVE NON-HANDICAPPED PRESCHOOLERS?

2 no
1 yes

34

5. ARE THERE CURRENTLY ANY MEMBERS OF YOUR PROGRAM STAFF WHOSE PRIMARY OR EXCLUSIVE FUNCTION IS TO PROVIDE CONSULTING AND/OR RESOURCE SERVICES TO HANDICAPPED CHILDREN?

2 no
1 yes

35-36 → ☐☐ Number of full-time teaching staff
37-38 ☐☐ Number of part-time teaching staff

39-40 ☐☐ Number of full-time resource staff

41-42 ☐☐ Number of part-time resource staff

43-44 ☐☐ Number of volunteers

6. DO YOU PROVIDE A MAINSTREAM PROGRAM FOR YOUR HANDICAPPED CHILDREN?

45
3 no

2 Yes, but only for non-classroom activities (free play, lunch, etc.)

1 yes

↳ 6a. WHAT TYPES OF MAINSTREAMING ARE AVAILABLE THROUGH YOUR PROGRAM? *(Check all that apply)*

46 ___ complete mainstreaming of handicapped child into a regular classroom *(no supportive services provided)*

47 ___ complete mainstreaming of handicapped child into a regular classroom with supportive assistance provided by a specialist

48 ___ complete mainstreaming of handicapped children in a classroom where the regular classroom teacher and a special education teacher cooperatively work with all children *(a team arrangement)*

49 ___ reverse mainstreaming in which normal children become part of a special education class

50 ___ partial mainstreaming where handicapped children are in a special education class but go to mainstreamed classes for one or more regular classroom activities

51 ___ handicapped children receive services from your program but are not mainstreamed

7. PLEASE INDICATE THE PROGRAM OPTIONS THAT ARE AVAILABLE TO THE CHILDREN IN YOUR PROGRAM. (*Check all that apply*)

52 _____ 5 days a week, center based full time

53 _____ 4 days a week, full time

54 _____ split sessions

55 _____ other variations in center-based attendance

56 _____ double sessions (*or part day*) 5 days a week

57 _____ double sessions (*or part day*) less than 5 days a week

58 _____ home based, no center attendance

59 _____ home based, center attendance, 1-2 times weekly

60 _____ home based, other regular schedule for center attendance

61 _____ home based, variable center attendance (*including special activities*)

62 _____ locally-designed options (*must have center attendance, otherwise code as*

8. DO THE CENTERS IN YOUR PROGRAM USE STANDARDIZED CURRICULUM FOR THE HANDICAPPED CHILDREN?

2 No

63 1 Yes

↳ 8a. Which standardized curriculae does your program use? (*Check the ones that apply*)

64 ___ Portage
65 ___ Peabody
66 ___ Learning Accomplishment Profile - Curriculum
67 ___ Cognitive (Ypsilanti)
68 ___ Montessori
69 ___ Frostig
70 ___ Other (*specify*) ______________________
71 ___ Other (*specify*) ______________________

9. DO YOU COORDINATE YOUR PROGRAM OF SERVICES FOR HANDICAPPED CHILDREN WITH ANY OF THE AGENCIES/INSTITUTIONS IN YOUR COMMUNITY LISTED BELOW? *(Circle the number that applies for each agency listed)*

21-22 = "02"

		None in the Area	No	Yes, Occasionally	Yes, Extensively
23	Private practitioner/ consultant	4	3	2	1
24	Hospital	4	3	2	1
25	Health clinic or department (public or state)	4	3	2	1
26	Mental health clinic or department (public or state)	4	3	2	1
27	Medicaid	4	3	2	1
28	Food Stamps Program	4	3	2	1
29	Food Commodities	4	3	2	1
30	Charitable Association (Easter Seal, Crippled Children Assoc., etc.)	4	3	2	1
31	Planned Parenthood	4	3	2	1
32	Family counseling agencies	4	3	2	1
33	Day Care program	4	3	2	1
34	Head Start Program	4	3	2	1
35	University affiliated facilities	4	3	2	1
36-37, 38	Other ________________	4	3	2	1
39-40, 41	Other ________________	4	3	2	1
42-43, 44	Other ________________	4	3	2	1

10. WHAT IS YOUR TOTAL FUNDING FOR FISCAL YEAR 1977?

45-51

☐☐☐☐☐☐☐

(5)

11. OF THE FOLLOWING FUNDS, WHICH HAVE YOU SPECIFICALLY EARMARKED (ALL OR A PORTION) FOR SERVICES TO THE HANDICAPPED? PLEASE INDICATE SOURCE, AMOUNT, AND LENGTH OF TIME YOU HAVE RECEIVED THESE FUNDS.

	SOURCE OF FUNDS	AMOUNT *(enter figure)*	NUMBER OF YEARS RECEIVED *(enter number)*
5[illegible]-55, 59-60	Basic Head Start grant	☐☐☐☐☐☐☐	☐☐
[illegible]-67, 68-69	Head Start Supplemental funds	☐☐☐☐☐☐☐	☐☐
70-76, 77-78	BEH First Chance funds	☐☐☐☐☐☐☐	☐☐
21-22 = "03"			
23-29, 30-31	State "reimbursement of services" funds	☐☐☐☐☐☐☐	☐☐
3[illegible]-38, 39-40	Other State funds	☐☐☐☐☐☐☐	☐☐
41-47, 48-49	Other local funds	☐☐☐☐☐☐☐	☐☐
5[illegible]-56, 57-58	Other Federal funds	☐☐☐☐☐☐☐	☐☐
5[illegible]-65, 66-67	Other Education for the Handicapped Act funds	☐☐☐☐☐☐☐	☐☐
6[illegible]-74, 75-76	Parent tuition	☐☐☐☐☐☐☐	☐☐
21-22 = "04"			
23-[illegible], 25-31, 32-33	Other (specify) ____________	☐☐☐☐☐☐☐	☐☐
34-35, 36-42, 43-44	Other (specify) ____________	☐☐☐☐☐☐☐	☐☐

CASE BACKGROUND DATA PROFILE

194

4. WOULD THIS CHILD BE CONSIDERED AS MULTIPLY HANDICAPPED?

35 2 no

1 yes

(specify handicaps; use codes from #2)

36-37,38-39,40-41 ☐☐ ☐☐ ☐☐

5. IS THIS CHILD PARTICIPATING IN A MAINSTREAMING PROGRAM?

42 2 no

1 yes

5a. IN WHICH OF THE FOLLOWING MAINSTREAMING OPTIONS HAVE YOU PLACED THIS CHILD? *(Check one that applies)*

1 complete mainstreaming of handicapped child into a regular classroom *(no supportive assistance)*

2 complete mainstreaming of handicapped child into a regular classroom with supportive assistance provided by a specialist

43 3 complete mainstreaming of handicapped children in a classroom where the regular classroom teacher and a special education teacher cooperatively work with all children *(a team arrangement)*

4 reverse mainstreaming in which normal children become part of a special education class

5 partial mainstreaming where handicapped children are in a special education class but go to mainstreamed classes for one or more regular classroom activities

6 handicapped children receive services from your program but are not mainstreamed

5b. HOW MANY HOURS WOULD YOU ESTIMATE THIS CHILD SPENDS IN A MAINSTREAMING SITUATION WITH NORMAL CLASSMATES?

44-45 ☐☐ *(Hours per week)*

(3)

5c. HOW MANY HOURS IS THIS CHILD'S MAINSTREAMING SITUATION POTENTIALLY AVAILABLE?

46-47 ☐☐ *(Hours per week)*

48-50 ☐☐☐ *(Interviewer: Compute percentage of available mainstreaming time the child actually participates in)*

6. IS THIS CHILD INVOLVED IN A CLASSROOM THAT USES A LOCALLY DESIGNED CURRICULUM?

51
2 No

1 Yes

↳ 6a. Which of the following types of curriculums were designed.

52 ___ Performance based (criterion referenced)
53 ___ Experienced based (discovery learning)
54-56 ___ Other *(specify)* ____________________
57-59 ___ Other *(specify)* ____________________

7. IS THIS CHILD INVOLVED IN A CLASSROOM THAT USES A CURRICULUM THAT IS LOCALLY ADAPTED FROM A STANDARDIZED CURRICULUM?

60
2 No

1 Yes

↳ 7a. Which of the following standardized curriculum were adapted? *(Check all that apply)*

61 ___ Portage
62 ___ Learning Accomplishment Profile - Curriculum
63 ___ Peabody
64 ___ Cognitive (Ypsilanti)
65 ___ Montessori
66 ___ Frostig
67,68-69 ___ Other *(specify)* ____________________
70,71-72 ___ Other *(specify)* ____________________

(4)

8. HOW LONG HAS THIS CHILD BEEN IN YOUR PROGRAM?

1 less than one year
73 2 one year
3 2 years
4 over 2 years

9. HOW WOULD YOU CHARACTERIZE THE INVOLVEMENT OF THIS CHILD'S PARENTS IN YOUR PROGRAM?

1 very active
74 2 average involvement
3 only minor involvement
4 do not participate at all

10. ARE THERE ANY SERVICES YOU WOULD LIKE TO MAKE AVAILABLE EITHER TO THIS CHILD OR HIS/HER FAMILY THAT YOU HAVE NOT HAD THE RESOURCES AND/OR THE TIME TO PROVIDE?

75 2 No
1 Yes
→ What Services? *(Interviewer: Coding will be done at later date. Enter responses verbatim)*

76 ☐ ____________________
77 ☐ ____________________
78 ☐ ____________________
79 ☐ ____________________

CALIFORNIA PRESCHOOL SOCIAL COMPETENCY SCALE

OMB forms clearance; but the study is authorized under:

OMB # 85-S77002

Expires 12/31/78

EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO HEAD START

APPLIED MANAGEMENT SCIENCES, INC.

PHASE II

CALIFORNIA PRESCHOOL SOCIAL COMPETENCY SCALE

1. Grantee ____________________
2. Delegate Agency ____________________
3. Alternate Program ____________________

D COLUMN

	Program Code	
1-5	☐☐☐☐☐	Respondent:
	Child Code	____________________ (Position/Title)
6-11	☐☐☐☐☐☐	Program Name:
	Form Number	____________________
12-13	0 4	____________________

Interview Date ___/___/___

Interviewer ____________________

____

1. IDENTIFICATION

1. Can state first name only.
2. Can state full name.
3. Can state full name and age as of last birthday.
4. Can state name, age, and address.

2. USING NAMES OF OTHERS

1. Uses no proper names in interacting with those around him.
2. Uses the names of no more than five children or adults.
3. Uses the names of from five to ten children.
4. Uses the names of virtually all children and adults.

3. GREETING NEW CHILD

When a new child joins the group—

1. He inadvertently physically overpowers child in greeting him (i.e., hugs, bumps, pulls).
2. He makes a limited and brief physical contact (i.e., pats, pokes, rubs) with child and some verbal contact.
3. He usually makes verbal contact and sometimes touches child.
4. He nearly always makes verbal contact with child without physical contact.

4. SAFE USE OF EQUIPMENT

1. He proceeds with activity, ignoring hazards involving height, weight, and distance (climbing on unstable equipment, stacking boxes too high, jumping onto off-balanced structures).
2. He proceeds with hazardous activity, sometimes seeking help and sometimes getting into difficulty.
3. He proceeds with hazardous activity but frequently seeks help when he is in difficulty.
4. He corrects hazards or seeks help before proceeding with activity.

5. REPORTING ACCIDENTS

When he has an accident (e.g., spilling, breaking)—

1. He does not report accidents.
2. He sometimes reports accidents.
3. He frequently reports accidents.
4. He nearly always reports accidents.

6. CONTINUING IN ACTIVITIES

1. He wanders from activity to activity with no sustained participation.
2. He continues in his own activity but is easily diverted when he notices activities of others.
3. He continues in his own activity and leaves it only when he is interrupted by others.
4. He continues in his own activity in spite of interruptions.

7. PERFORMING TASKS

1. He usually has to be asked two or three times before he will begin a task.
2. He usually begins task the first time he is asked but dawdles and has to be reminded.
3. He begins task the first time he is asked but is slow in completing task.
4. He begins task first time he is asked and is prompt in completing task.

8. FOLLOWING VERBAL INSTRUCTIONS

He can follow verbal instructions—

1. When they are accompanied by demonstration.
2. Without a demonstration, if one specific instruction is involved.
3. Without a demonstration, when it involves two specific instructions.
4. Without a demonstration, when it involves three or more instructions.

9. FOLLOWING NEW INSTRUCTIONS

1. He carries out one familiar instruction.
2. He carries out one new instruction the first time it is given.
3. He follows new instructions given one at a time, as well as familiar ones.
4. He follows several new instructions given at a time, as well as familiar ones.

10. REMEMBERING INSTRUCTIONS

1. He nearly always needs to have instructions or demonstration repeated before he can perform the activity on his own.
2. He frequently requires repetition, a reminder, or affirmation that he is proceeding correctly.
3. He occasionally needs repetition of instruction for part of the activity before completing the activity.
4. He performs the activity without requiring repetition of instructions.

11. MAKING EXPLANATION TO OTHER CHILDREN

When attempting to explain to another child how to do something (put things together, play a game, etc.)—

1. He is unable to do so.
2. He gives an incomplete explanation.
3. He gives a complete but general explanation.
4. He gives a complete explanation with specific details.

12. COMMUNICATING WANTS

1. He seldom verbalizes his wants; acts out by pointing, pulling, crying, etc.
2. He sometimes verbalizes but usually combines actions with words.
3. He usually verbalizes but sometimes acts out his wants.
4. He nearly always verbalizes his wants.

13. BORROWING

1. He takes objects *when in use* by others without asking permission.
2. He sometimes asks permission to use other's objects.
3. He frequently asks permission to use other's objects.
4. He nearly always asks permission to use other's objects.

14. RETURNING PROPERTY

When he has borrowed something—

1. He seldom attempts to return the property to its owner.
2. He occasionally attempts to return the property to its owner.
3. He frequently attempts to return the property to its owner.
4. He nearly always returns the property to its owner.

15. SHARING

1. He does not share equipment or toys.
2. He shares but only after adult intervention.
3. He occasionally shares willingly with other children.
4. He frequently shares willingly with other children.

16. HELPING OTHERS

When another child is having difficulty (such as using equipment, dressing)—

1. He never helps the other child.
2. He helps another child *only* when they are playing together.
3. He sometimes stops his own play to help another child.
4. He frequently stops his own play to help another child.

17. PLAYING WITH OTHERS

1. He usually plays by himself.
2. He plays with others but limits play to one or two children.
3. He occasionally plays with a larger group (three or more children).
4. He usually plays with a larger group (three or more children).

18. INITIATING INVOLVEMENT

When other children are involved in an activity which permits the inclusion of additional children—

1. He seldom initiates getting involved in the activity.
2. He sometimes initiates getting involved in the activity.
3. He frequently initiates getting involved in the activity.
4. He nearly always initiates getting involved in the activity.

19. INITIATING GROUP ACTIVITIES

1. He nearly always initiates activities which are solely for his his own play.
2. He initiates his own activities and allows one child to join him.
3. He sometimes initiates activities which include two or more children.
4. He frequently initiates activities which are of a group nature.

20. GIVING DIRECTION TO PLAY

When playing with others—

1. He typically follows the lead of others.
2. He sometimes makes suggestions for the direction of the play.
3. He frequently makes suggestions for the direction of the play.
4. He nearly always makes suggestions for the direction of the play.

21. TAKING TURNS

1. He frequently interrupts or pushes others to get ahead of them in an activity taking turns.
2. He attempts to take turn ahead of time but does not push or quarrel in order to do so.
3. He waits for turn, but teases or pushes those ahead of him.
4. He waits for turn or waits to be called on.

22. REACTION TO FRUSTRATION

When he does not get what he wants or things are not going well—

1. He has a tantrum (screams, kicks, throws, etc.).
2. He finds a substitute activity without seeking help in solving the problem.
3. He seeks help from others in solving problem without making an attempt to solve it himself.
4. He seeks help from others in solving the problem after making an effort to solve it himself.

23. DEPENDENCE UPON ADULTS

He will continue in an activity on his own without having an adult participate with him or encourage him—

1. Hardly ever.
2. Sometimes.
3. Frequently.
4. Nearly always.

24. ACCEPTING LIMITS

When an adult sets limits on the child's activity (play space, use of material, type of activity) he accepts the limits—

1. Hardly ever.
2. Sometimes.
3. Frequently.
4. Nearly always.

25. EFFECTING TRANSITIONS

In changing from one activity to another—

1. He requires personal contact by adult (i.e., holding hands, leading).
2. He will not move toward new activity until the physical arrangements have been completed.
3. He moves toward new activity when the teacher announces the activity.
4. He moves toward new activity without physical or verbal cues.

26. CHANGES IN ROUTINE

The child accepts changes in routine (daily schedule, room arrangements, adults) without resistance or becoming upset—

1. Hardly ever.
2. Sometimes.
3. Frequently.
4. Nearly always.

27. REASSURANCE IN PUBLIC PLACES

When taken to public places he must be given physical or verbal reassurance—

1. Nearly always.
2. Frequently.
3. Sometimes.
4. Hardly ever.

28. RESPONSE TO UNFAMILIAR ADULTS

1. He avoids or withdraws from any contact with unfamiliar adults.
2. He, when initially approached by unfamiliar adults, avoids contact, but if approached again, is responsive.
3. He responds to overtures by unfamiliar adults but does not initiate contact.
4. He readily moves toward unfamiliar adults.

29. UNFAMILIAR SITUATIONS

1. He restricts himself to activities in which he has previously engaged.
2. He joins in an activity which is new for him only if other children are engaged in it.
3. He joins with other children in an activity which is new to everyone.
4. He engages in an activity which is new for him even though other children are not involved.

30. SEEKING HELP

When he is involved in an activity in which he needs help—

1. He leaves the activity without seeking help.
2. He continues in the activity but only if help is offered.
3. He persists in the activity and finally seeks help.
4. He seeks help from others after making a brief attempt.

TOTAL SCORE ________

CALIFORNIA PRESCHOOL SOCIAL COMPETENCY SCALE

PROFILE SHEET

-22="01"
3-24="00"
25-26="00"

Child's Name ______________________ Norm Table Used ____________

Sex: __________ Age ____ _____ Total Score: __________ Percentile: __________

	Item	0	1	2	3	4
27	1. Identification	•	•	•	•	•
28	2. Using Names of Others	•	•	•	•	•
29	3. Greeting New Child	•	•	•	•	•
30	4. Safe Use of Equipment	•	•	•	•	•
31	5. Reporting Accidents	•	•	•	•	•
32	6. Continuing in Activities	•	•	•	•	•
33	7. Performing Tasks	•	•	•	•	•
34	8. Following Verbal Instructions	•	•	•	•	•
35	9. Following New Instructions	•	•	•	•	•
36	10. Remembering Instructions	•	•	•	•	•
37	11. Making Explanation to Other Children	•	•	•	•	•
38	12. Communicating Wants	•	•	•	•	•
39	13. Borrowing	•	•	•	•	•
40	14. Returning Property	•	•	•	•	•
41	15. Sharing	•	•	•	•	•
42	16. Helping Others	•	•	•	•	•
43	17. Playing with Others	•	•	•	•	•
44	18. Initiating Involvement	•	•	•	•	•
45	19. Initiating Group Activities	•	•	•	•	•
46	20. Giving Direction to Play	•	•	•	•	•
47	21. Taking Turns	•	•	•	•	•
48	22. Reaction to Frustration	•	•	•	•	•
49	23. Dependence upon Adults	•	•	•	•	•
50	24. Accepting Limits	•	•	•	•	•
51	25. Effecting Transitions	•	•	•	•	•
52	26. Changes in Routine	•	•	•	•	•
53	27. Reassurance in Public Places	•	•	•	•	•
54	28. Response to Unfamiliar Adults	•	•	•	•	•
55	29. Unfamiliar Situations	•	•	•	•	•
56	30. Seeking Help	•	•	•	•	•

Comments and Recommendations: ____________________________________

57-58 Total ________

Signed ______________________________

TEACHER INTERVIEW SCHEDULE

PART I: TEACHER BACKGROUND

Below you will find a series of questions about yourself and your experience with special children. Circle the answers to these questions which come closest to describing you and your background.

21-22="01"

For Office
Use Only

1. How many years have you worked with preschool handicapped children?

1 Less than 1 year

2 1-2 years

23 3 3-5 years

4 over 5 years

2. Prior to this program year what types of contact have you had with handicapped children? (Check all that apply)

24 ____ as a volunteer

25 ____ as a teacher

26 ____ as an aide

27 ____ as a parent

28 ____ as a sibling

29,30-31 ____ other (specify) ____________________

32,33-34 ____ other (specify) ____________________

35 ____ none

3. What is the highest level of education you have completed?

1 some high school, but no diploma

2 high school graduate (or GED)

36 3 some college, but no degree

4 associate degree

5 bachelor's degree

6 postgraduate study

4. If you are a college graduate, what is your present area of specialization?

1 special education

2 early childhood development

3 other degree area

37 4 does not apply

5. Have you received any other formal classroom training that has prepared you to work with preschool children?

3 no

38,39-40 2 yes, I'm a Child Development Associate (or soon will be)

1 yes, I have other special training ________ (specify)

For Office Use Only	
	6. Are you certified by your State Department of Education to teach handicapped children?
41	2 no 1 yes
	7. What do you consider to be your most important training needs at this time? (Check no more than three training areas)
42	____ knowledge of Head Start performance standards
43	____ behavior modification/classroom management
44	____ individualized instructional techniques
45	____ preparation of individualized learning objectives
46	____ working with parents
47	____ strategies for recruitment of handicapped children
48	____ screening and assessment
49	____ theory and practice of mainstreaming
50	____ specific training for a handicapping condition (e.g., blind, deaf)
51	____ understanding handicapping conditions
52,53-54	____ other (specify) ____________________
55,56-57	____ other (specify) ____________________
	8. How many children do you have enrolled in your class?
58-60	☐☐☐ (enter number)
	8a. Of this number, how many have been identified as handicapped?
61-63	☐☐☐
	8b. Of the handicapped children how many are:
64-66	☐☐☐ American Indian or Alaskan Native
67-69	☐☐☐ Asian or Pacific Islander
70-72	☐☐☐ Black, not of Hispanic origin
73-75	☐☐☐ Hispanic
76-78	☐☐☐ White, not of Hispanic origin

21-22="02"

23-25 9. How many paid adult staff (excluding yourself) are generally in your class during the day?

☐☐

26-28 10. How many volunteers are generally in your class during the day?

☐☐

29-31 10a. Of this number, how many are parents of handicapped children enrolled?

☐☐☐

32 11. Which of the following represents your salary? (Circle one)

1 $5,000 or less
2 $5,000 to $7,000
3 $7,000 to $10,000
4 $10,000 to $12,000
5 Over $12,000

206

PART II: TEACHER ATTITUDES AND OPINIONS

TEACHER INTERVIEW

Since this is an opinion scale, the only "right" answers are those that you feel express what you think about mainstreaming and children with handicaps.

21-22="01" All of the items are views with which you may agree or disagree. Mark the number which most accurately describes your feelings and thoughts about each statement.

Strongly Agree — Neutral — Strongly Disagree

23 1. I like to work with handicapped children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

24 2 I feel it is good for the normal children to be in the same classroom as handicapped children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

25 3. Working with handicapped children takes too much classroom time away from normal children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

26 4. I think mainstreaming is harmful to normal children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

27 5. It's hard for me to make handicapped children feel "at home" in my class. 1___ 2___ 3___ 4___ 5___ 6___ 7___

28 6. I feel mainstreaming is harmful to many handicapped children 1___ 2___ 3___ 4___ 5___ 6___ 7___

29 7. For me working with handicapped children and normal children is difficult in a regular classroom setting. 1___ 2___ 3___ 4___ 5___ 6___ 7___

30 8. It seems to me that handicapped children learn more in special classes that do not include normal children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

31 9. I feel that handicapped children need to be made aware of their limitations. 1___ 2___ 3___ 4___ 5___ 6___ 7___

32 10. I am afraid of working with some handicapped children. 1___ 2___ 3___ 4___ 5___ 6___ 7___

33 11. It seems to me that handicapped children tend to "give up" in the regular classroom setting. 1___ 2___ 3___ 4___ 5___ 6___ 7___

34 12. The integration of handicapped children in regular classes slows down the learning of the other children in my class. 1___ 2___ 3___ 4___ 5___ 6___ 7___

35 13. Planning instruction for both handicapped and normal children demands too much additional teacher preparation time. 1___ 2___ 3___ 4___ 5___ 6___ 7___

36 14. I think handicapped children should be mainstreamed, but they should have teachers with more special training than I have. 1___ 2___ 3___ 4___ 5___ 6___ 7___

			Strongly Agree — Neutral — Strongly Disagree
37	15.	Handicapped children are more like normal children than they are different.	1___ 2___ 3___ 4___ 5___ 6___ 7___
38	16.	I think that normal and handicapped children get along well with one another.	1___ 2___ 3___ 4___ 5___ 6___ 7___
39	17.	It seems to me that handicapped children are withdrawn around the normal children in the class.	1___ 2___ 3___ 4___ 5___ 6___ 7___
40	18.	I think normal children do not try as hard around handicapped children.	1___ 2___ 3___ 4___ 5___ 6___ 7___
41	19.	Being in the same class with normal children helps the social development of handicapped children.	1___ 2___ 3___ 4___ 5___ 6___ 7___

SCHAEFER TEACHER INVENTORY I
(general form)

SCHAEFER TEACHER INVENTORY I
(general form)

21-22="01"

Check the number of the response that most closely reflects how you really feel about each statement. There are no right or wrong answers.

			Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
23	1.	Meetings with parents are really not very useful	1___	2___	3___	4___	5___
24	2.	A child's success in learning is influenced more by the home than the Center	1___	2___	3___	4___	5___
25	3.	I know how to conduct a useful parent-teacher conference	1___	2___	3___	4___	5___
26	4.	Parents are good about letting me know that they appreciate my efforts	1___	2___	3___	4___	5___
27	5.	It is hard to face the parents of a child who is doing poorly	1___	2___	3___	4___	5___
28	6.	I do not want to work with parents any more than I already do	1___	2___	3___	4___	5___
29	7.	Conferences with parents sometimes make me uneasy	1___	2___	3___	4___	5___
30	8.	Meetings with parents do not help me achieve my goals for the children	1___	2___	3___	4___	5___
31	9.	The most important part of a child's learning happens at home before she starts in any school	1___	2___	3___	4___	5___
32	10.	I feel comfortable calling parents about any questions I have	1___	2___	3___	4___	5___
33	11.	Most parents seem to appreciate what I do for their children	1___	2___	3___	4___	5___
34	12.	It is unpleasant talking to a parent whose child is not doing as well as he should	1___	2___	3___	4___	5___
35	13.	Working more with parents would interfere too much with my other teaching responsibilities	1___	2___	3___	4___	5___

			Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
36	14.	I feel ill-at-ease when I visit with a child's parents	1	2	3	4	5
37	15.	Meetings with parents are not worth the time they take	1	2	3	4	5
38	16.	Even during a child's school years the most important part of learning takes place at home	1	2	3	4	5
39	17.	When a child comes to the Center with a problem, I feel comfortable talking to the parents	1	2	3	4	5
40	18.	Parents want me to tell them how to help their child learn	1	2	3	4	5
41	19.	It is a strain on me to discuss a child's problems with his parents	1	2	3	4	5
42	20.	Working with parents is too much to expect from the classroom teacher	1	2	3	4	5
43	21.	I get tense when I have to talk to a parent about a child	1	2	3	4	5

(educational beliefs)

			Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
44	1.	The most important thing to teach children is absolute obedience to parents	1	2	3	4	5
45	2.	Although adults may have difficulty accepting them, all children are basically good at heart	1	2	3	4	5
46	3.	Basically, children learn by being told about the world	1	2	3	4	5
47	4.	Teachers should show the same amount of affection to all their children	1	2	3	4	5
48	5.	Children will get on any woman's nerves if she has to be with them all day	1	2	3	4	5
49	6.	The most important thing to teach children is absolute obedience to whoever is in authority	1	2	3	4	5
50	7.	Children should always obey their parents	1	2	3	4	5
51	8.	All children are good by nature	1	2	3	4	5
52	9.	Children's learning results mainly from being presented basic information again and again	1	2	3	4	5
53	10.	Teachers should give all children an equal amount of praise	1	2	3	4	5
54	11.	Mothers very often feel that they can't stand their children a moment longer	1	2	3	4	5
55	12.	Children should always obey the teacher	1	2	3	4	5
56	13.	Children should not question the authority of their parents	1	2	3	4	5

			Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
57	14.	Children are born good; it is society that turns some children into trouble-makers	1___	2___	3___	4___	5___
58	15.	A child learns primarily by absorbing knowledge she is given by others	1___	2___	3___	4___	5___
59	16.	Teachers should discipline all the children the same	1___	2___	3___	4___	5___
60	17.	Raising children is a nerve-racking job	1___	2___	3___	4___	5___
61	18.	Children should not question the authority of the teacher	1___	2___	3___	4___	5___
62	19.	Children should always do what their parents say, no matter what	1___	2___	3___	4___	5___
63	20.	In order to be fair, a teacher must treat all children alike	1___	2___	3___	4___	5___
64	21.	Children should always do what the teacher says, no matter what	1___	2___	3___	4___	5___
65	22.	Children should be treated the same regardless of differences among them	1___	2___	3___	4___	5___

SHAEFER TEACHER PERCEPTION OF CENTER ENVIRONMENT

SHAEFER TEACHER PERCEPTION OF CENTER ENVIRONMENT

21-22="01" Mark the number of the response that most closely reflects how you really feel about each statement. There are no right or wrong answers.

				Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
23	I.	1.	My ideas are generally supported by other staff members	1___	2___	3___	4___	5___
24		2.	Fellow staff members encourage me with my work	1___	2___	3___	4___	5___
25		3.	The staff would provide support if things didn't go well	1___	2___	3___	4___	5___
26	II.	1.	The staff is warm and friendly	1___	2___	3___	4___	5___
27		2.	Staff members make me feel that I can confide in them	1___	2___	3___	4___	5___
28		3.	The friendliness of the staff is a benefit in this job	1___	2___	3___	4___	5___
29	III.	1.	The director encourages me to involve parents in their child's education	1___	2___	3___	4___	5___
30		2.	The director would support my attempts to involve parents in their child's education	1___	2___	3___	4___	5___
31		3.	Center policies favor teachers' efforts to involve parents in their child's education	1___	2___	3___	4___	5___
32	IV.	1.	The director encourages parents to take the initiative in contacting teachers	1___	2___	3___	4___	5___
33		2.	The director makes parents feel free to contact their child's teacher	1___	2___	3___	4___	5___
34		3.	The Center director supports parents contacting teachers for any reason	1___	2___	3___	4___	5___

				Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
35	V.	1.	The Center provides me opportunities for discussion with other teachers	1___	2___	3___	4___	5___
36		2.	There is ample opportunity scheduled for me to talk with the other teachers	1___	2___	3___	4___	5___
37		3.	I have enough time during working hours to talk with other teachers about important matters	1___	2___	3___	4___	5___
38	VI.	1.	In matters of importance the teachers' point of view is considered by the director in making decisions	1___	2___	3___	4___	5___
39		2.	What teachers think helps determine Center decisions	1___	2___	3___	4___	5___
40		3.	Teacher input is considered an important part of the decision makiing process in this Center	1___	2___	3___	4___	5___
41	VII.	1.	Rules important to Center functioning are arrived at together by the teachers, the director, and the parent policy committee	1___	2___	3___	4___	5___
42		2.	Basic Center rules are arrived at through joint teacher-director-parent policy committee decisions	1___	2___	3___	4___	5___
43		3.	Rules are decided upon through a majority decision by the director, parent policy committee and teachers	1___	2___	3___	4___	5___
44	VIII.	1.	My suggestions seldom are accepted by colleagues	1___	2___	3___	4___	5___
45		2.	I have little voice in decision making in this school	1___	2___	3___	4___	5___
46		3.	I have little hope in making changes in this school	1___	2___	3___	4___	5___

				Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree
47	IX.	1.	The director gives frequent feedback about my work	1___	2___	3___	4___	5___
48		2.	The director takes time regularly to provide feedback about teaching skills	1___	2___	3___	4___	5___
49		3.	Helpful suggestions are given to teachers by the director	1___	2___	3___	4___	5___
50	X.	1.	Teachers are given help in improving skills they feel they need	1___	2___	3___	4___	5___
51		2.	Help is provided to a teacher in areas she feels she needs to work on	1___	2___	3___	4___	5___
52		3.	The teachers in this Center are given help in correcting their weaknesses	1___	2___	3___	4___	5___
53	XI.	1.	Teachers in this Center help one another with their classroom problems	1___	2___	3___	4___	5___
54		2.	The teaching staff in this Center provides each other with mutual assistance for working on problem areas	1___	2___	3___	4___	5___
55		3.	Teachers are happy to share their skills with one another	1___	2___	3___	4___	5___

XII. Please rank these job factors which might help to keep you in teaching. Rank them in the order of importance to you from greatest (1) to least (6), using the numbers 1-6.

56 Money, job security and possible promotions ______

57 The Center director's and parent policy committee's commitment to the education of children ______

58 Personal satisfaction gained from teaching ______

59 Interest of the director in the welfare of children ______

60 Good benefits and long vacations ______

61 The feeling that I can make a difference in the lives of the children ______

This instrument does not require OMB forms clearance; but the study is authorized under:

OMB # 85-S77002

Expires 12/31/73

EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO HEAD START

APPLIED MANAGEMENT SCIENCES, INC.

PHASE II

ALPERN-BOLL DEVELOPMENTAL PROFILE

1. Grantee ______________________________
2. Delegate Agency ______________________________

Program Code

1-5

Child Code

6-11

Form Number

12-13

0	8

Respondent:

____
(Position/Title)

Program Name:

____

____

Interview Date ___/___/___

Interviewer ______________________________

____

DEVELOPMENTAL PROFILE

SCORING & REPORT FORM

PSYCHOLOGICAL DEVELOPMENT PUBLICATIONS
P.O. Box 3198
Aspen, Colorado 81611

Copyright 1972
Gerald D. Alpern, Ph. D.
Thomas J. Boll, Ph. D.

Child's Name: ____________ *School Placement:* ____________ *Date:* ____________

Rater: ____________ *Birthdate:* ____________

21-22 = "01" *Interviewee:* ____________ *Relationship to Child:* ____________ *Chronological Age:* ____________

A.61

DEVELOPMENTAL SKILL AGE PROFILE

, 24-25	Physical Age	☐ ☐☐ yrs. · mos.	____________
, 27-28	Self-Help Age	☐ ☐☐ yrs. · mos.	____________
, 30-31	Social Age	☐ ☐☐ yrs. · mos.	____________
, 33-34	Academic Age	☐ ☐☐ yrs. · mos.	____________
, 36-37	Communication Age	☐ ☐☐ yrs. · mos.	____________
38-40	I. Q. Equivalency Score	☐☐☐	____________

COMMENTS AND CONCLUSIONS

____

____

PHYSICAL SCALE SCORING FORM

ITEM	SCORING Fail	 Pass	BASAL CREDIT	ITEM	SCORING Fail	 Pass	BASAL CREDIT
P-1	0	2 mos.		P-22	0	4 mos.	
P-2	0	2 "		P-23	0	4 "	
P-3	0	2 "	½ yr.	P-24	0	4 "	4½ yrs.
P-4	0	2 "		P-25	0	4 "	
P-5	0	2 "		P-26	0	4 "	
P-6	0	2 "	1 yr.	P-27	0	4 "	5½ yrs.
P-7	0	2 "		P-28	0	4 "	
P-8	0	2 "		P-29	0	4 "	
P-9	0	2 "	1½ yrs.	P-30	0	4 "	6½ yrs.
P-10	0	2 "		P-31	0	4 "	
P-11	0	2 "		P-32	0	4 "	
P-12	0	2 "	2 yrs.	P-33	0	4 "	7½ yrs.
P-13	0	2 "		P-34	0	4 "	
P-14	0	2 "		P-35	0	4 "	
P-15	0	2 "	2½ yrs.	P-36	0	4 "	8½ yrs.
P-16	0	2 "		P-37	0	4 "	
P-17	0	2 "		P-38	0	4 "	
P-18	0	2 "	3 yrs.	P-39	0	4 "	9½ yrs.
P-19	0	2 "		P-40	0	6 "	
P-20	0	2 "		P-41	0	6 "	
P-21	0	2 "	3½ yrs.				10½ yrs.

SCALE SUMMARY

BASAL CREDIT
Age credit in highest (oldest) box in which all items are passed.

____
Yrs. – Mos.

ADDITIONAL CREDIT
Sum of months credit (items passed) beyond basal level.

____
– Mos.

A.62

PHYSICAL AGE
Basal credit plus additional credit.

____
Yrs. – Mos.

Directions:
Circle zero for items failed. Circle number (months credit) for items passed. Manual offers complete directions.

SELF-HELP SCALE SCORING FORM

ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT	ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT	ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT
S-H 1	0	2 mos.		S-H 22	0	4 mos.		S-H 43	0	4 mos.	
S-H 2	0	2 "		S-H 23	0	4 "		S-H 44	0	4 "	
S-H 3	0	2 "	½ yr.	S-H 24	0	4 "	4½ yrs.	S-H 45	0	4 "	11½ yrs.
S-H 4	0	2 "		S-H 25	0	4 "		S-H 46	0	4 "	
S-H 5	0	2 "		S-H 26	0	4 "		S-H 47	0	4 "	
S-H 6	0	2 "	1 yr.	S-H 27	0	4 "	5½ yrs.	S-H 48	0	4 "	12½ yrs.
S-H 7	0	2 "		S-H 28	0	4 "					
S-H 8	0	2 "		S-H 29	0	4 "					
S-H 9	0	2 "	1½ yrs.	S-H 30	0	4 "	6½ yrs.				
S-H 10	0	2 "		S-H 31	0	4 "					
S-H 11	0	2 "		S-H 32	0	4 "					
S-H 12	0	2 "	2 yrs	S-H 33	0	4 "	7½ yrs.				
S-H 13	0	2 "		S-H 34	0	4 "					
S-H 14	0	2 "		S-H 35	0	4 "					
S-H 15	0	2 "	2½ yrs.	S-H 36	0	4 "	8½ yrs.				
S-H 16	0	2 "		S-H 37	0	4 "					
S-H 17	0	2 "		S-H 38	0	4 "					
S-H 18	0	2 "	3 yrs.	S-H 39	0	4 "	9½ yrs.				
S-H 19	0	2 "		S-H 40	0	4 "					
S-H 20	0	2 "		S-H 41	0	4 "					
S-H 21	0	2 "	3½ yrs.	S-H 42	0	4 "	10½ yrs.				

SCALE SUMMARY

BASAL CREDIT

Age credit in highest (oldest) box in which all items are passed.

_______ Yrs. – Mos.

ADDITIONAL CREDIT

Sum of months credit (items passed) beyond basal level.

_______ – Mos.

SELF-HELP AGE

Basal credit plus additional credit.

_______ Yrs. – Mos.

Directions:

Circle zero for items failed. Circle number (months credit) for items passed. Manual offers complete directions.

SOCIAL SCALE SCORING FORM

ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT	ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT	ITEM	SCORING Fail	SCORING Pass	BASAL CREDIT
S-1	0	2 mos.		S-22	0	4 mos.		S-43	0	4 mos.	
S-2	0	2 "		S-23	0	4 "		S-44	0	4 "	
S-3	0	2 "	½ yr.	S-24	0	4 "	4½ yrs.	S-45	0	4 "	11½ yrs.
S-4	0	2 "		S-25	0	4 "					
S-5	0	2 "		S-26	0	4 "					
S-6	0	2 "	1 yr.	S-27	0	4 "	5½ yrs.				
S-7	0	2 "		S-28	0	4 "					
S-8	0	2 "		S-29	0	4 "					
S-9	0	2 "	1½ yrs.	S-30	0	4 "	6½ yrs.				
S-10	0	2 "		S-31	0	4 "					
S-11	0	2 "		S-32	0	4 "					
S-12	0	2 "	2 yrs.	S-33	0	4 "	7½ yrs.				
S-13	0	2 "		S-34	0	4 "					
S-14	0	2 "		S-35	0	4 "					
S-15	0	2 "	2½ yrs.	S-36	0	4 "	8½ yrs.				
S-16	0	2 "		S-37	0	4 "					
S-17	0	2 "		S-38	0	4 "					
S-18	0	2 "	3 yrs.	S-39	0	4 "	9½ yrs.				
S-19	0	2 "		S-40	0	4 "					
S-20	0	2 "		S-41	0	4 "					
S-21	0	2 "	3½ yrs.	S-42	0	4 "	10½ yrs.				

SCALE SUMMARY

BASAL CREDIT
Age credit in highest (oldest) box in which all items are passed.
______ Yrs. - Mos.

ADDITIONAL CREDIT
Sum of months credit (items passed) beyond basal level.
______ Mos.

SOCIAL AGE
Basal credit plus additional credit
______ Yrs. - Mos.

Directions:
Circle zero for items failed. Circle number (months credit) for items passed. Manual offers complete directions.

ACADEMIC SCALE SCORING FORM

	SCORING		BASAL		SCORING		BASAL		SCORING		BASAL
ITEM	Fail	Pass	CREDIT	ITEM	Fail	Pass	CREDIT	ITEM	Fail	Pass	CREDIT
A–1	0	2 mos.		A–20	0	4 mos.		A–38	0	6 mos.	
A–2	0	2 "		A–21	0	4 "		A–39	0	6 "	
A–3	0	2 "	½ yr.	A–22	0	4 "	4½ yrs.				11½ yrs.
A–4	0	3 "		A–23	0	4 "					
A–5	0	3 "		A–24	0	4 "					
			1 yr.	A–25	0	4 "	5½ yrs.				
A–6	0	3 "		A–26	0	4 "					
A–7	0	3 "		A–27	0	4 "					
			1½ yrs.	A–28	0	4 "	6½ yrs.				
A–8	0	2 "		A–29	0	4 "					
A–9	0	2 "		A–30	0	4 "					
A–10	0	2 "	2 yrs.	A–31	0	4 "	7½ yrs.				
A–11	0	2 "		A–32	0	6 "					
A–12	0	2 "		A–33	0	6 "					
A–13	0	2 "	2½ yrs.				8½ yrs.				
A–14	0	2 "		A–34	0	6 "					
A–15	0	2 "		A–35	0	6 "					
A–16	0	2 "	3 yrs.				9½ yrs.				
A–17	0	2 "		A–36	0	6 "					
A–18	0	2 "		A–37	0	6 "					
A–19	0	2 "	3½ yrs.				10½ yrs.				

SCALE SUMMARY

BASAL CREDIT
Age credit in highest (oldest) box in which all items are passed.

Yrs. – Mos.

ADDITIONAL CREDIT
Sum of months credit (items passed) beyond basal level.

– Mos.

ACADEMIC AGE
Basal credit plus additional credit.

Yrs. – Mos.

Directions:
Circle zero for items failed. Circle number (months credit) for items passed. Manual offers complete directions.

A.65

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COMMUNICATION SCALE SCORING FORM

ITEM	SCORING		BASAL CREDIT
	Fail	Pass	
C-1	0	2 mos.	
C-2	0	2 "	
C-3	0	2 "	½ yr.
C-4	0	2 "	
C-5	0	2 "	
C-6	0	2 "	1 yr.
C-7	0	2 "	
C-8	0	2 "	
C-9	0	2 "	1½ yrs.
C-10	0	2 "	
C-11	0	2 "	
C-12	0	2 "	2 yrs.
C-13	0	2 "	
C-14	0	2 "	
C-15	0	2 "	2½ yrs.
C-16	0	2 "	
C-17	0	2 "	
C-18	0	2 "	3 yrs.
C-19	0	2 "	
C-20	0	2 "	
C-21	0	2 "	3½ yrs.
C-22	0	4 mos.	
C-23	0	4 "	
C-24	0	4 "	4½ yrs.
C-25	0	4 "	
C-26	0	4 "	
C-27	0	4 "	5½ yrs.
C-28	0	4 "	
C-29	0	4 "	
C-30	0	4 "	6½ yrs.
C-31	0	4 "	
C-32	0	4 "	
C-33	0	4 "	7½ yrs.
C-34	0	6 "	
C-35	0	6 "	
			8½ yrs.
C-36	0	4 "	
C-37	0	4 "	
C-38	0	4 "	9½ yrs.
C-39	0	6 "	
C-40	0	6 "	
			10½ yrs.
C-41	0	6 mos.	
C-42	0	6 "	
			11½ yrs.
C-43	0	6 "	
C-44	0	6 "	
			12½ yrs.

SCALE SUMMARY

BASAL CREDIT
Age credit in highest (oldest) box in which all items are passed. ______ Yrs. - Mos.

ADDITIONAL CREDIT
Sum of months credit (items passed) beyond basal level. ______ Mos.

COMMUNICATION AGE
Basal credit plus additional credit ______ Yrs. - Mos.

Directions:
Circle zero for items failed. Circle number (months credit) for items passed. Manual offers complete directions.

HIGH SCOPE HOME ENVIRONMENT SCALE

This instrument does not require OMB forms clearance; but the study is authorized under:

OMB # 85-S77002

Expires 12/31/78

EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO HEAD START

APPLIED MANAGEMENT SCIENCES, INC.

PHASE II

HIGH SCOPE HOME ENVIRONMENT SCALE

1. Grantee ______________________________
2. Delegate Agency ______________________________
3. Alternate Program ______________________________

CARD COLUMN

Program Code

1-5						

Child Code

6-11						

Form Number

12-13	1	0

Respondent:

____
(Position/Title)

Program Name:

____

____

Interview Date ___/___/___

Interviewer ______________________________

____

Child's Name ______________________ Time Started ____________
First Last

Focal Parent's Name ______________________ Time Finished ____________

Community/City ____________ State ________ Date ____________

Tester ____________

Comments (Child became ill, refused, etc.) ______________________

____

HIGH/SCOPE HOME ENVIRONMENT SCALE

This booklet was prepared by High/Scope Educational Research Foundation, Ypsilanti, Michigan for use under Office of Child Development, HEW, Contract No. HEW-OS-72-127.

April, 1975

HIGH/SCOPE HOME ENVIRONMENT SCALE

1-22 = "01" I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT THE ACTIVITIES THA
_______________ DOES FROM DAY TO DAY. SOME OF THE QUESTIONS ARE ABOUT
(Child's Name)
THINGS HE (SHE) PLAYS WITH, AND SOME ARE ABOUT THINGS THAT YOU D
TOGETHER. THE QUESTIONS WILL HELP US TO UNDERSTAND MORE ABOUT WHAT CONDITIONS ARE BEST FOR A YOUNG CHILD AS HE (SHE) GROWS.

1. HOW MANY CHILDREN'S BOOKS ARE IN YOUR HOME THAT _______________ CAN LOOK AT?
(Child's Name)

23 Would you say: 3 fifteen or more
or: 2 several, but not fifteen
or: 1 three or fewer

2. HOW OFTEN WOULD YOU SAY SOMEONE READS STORIES TO _______________?
(Child's Name)

24 Would you say: 3 almost every day
or: 2 several times a week
or: 1 not that often?

3. HOW OFTEN DO YOU AND _______________ TALK ABOUT THE PICTURES HE (SHE) MAKES, WHAT HE (SHE) DOES DURING THE DAY, HIS (HER) FRIENDS AND SO ON?
(Child's Name)

25 Would you say: 3 for about a half-hour or more every day
or: 2 for a few minutes every day
or: 1 several times a week or less?

4. HOW OFTEN DO YOU LET _______________ HELP YOU WHILE YOU ARE COOKING, CLEANING THE HOUSE, WASHING DISHES, OR DOING OTHER HOUSEHOLD TASKS?
(Child's Name)

26 Would you say: 3 almost every day
or: 2 several times a week
or: 1 not that often?

5. I'M GOING TO READ A LIST OF HOUSEHOLD TASKS THAT CHILDREN SOM TIMES HELP WITH. PLEASE TELL ME WHICH OF THEM ______________ HA
(Child's Name)
HELPED YOU WITH IN THE LAST MONTH.

	Yes	No	
27	1	0	clean or peel food for a meal
	1	0	mix or bake things, like cookies
29	1	0	stir things while they cook, like soup, pudding, or jello
3	1	0	find food on shelves at the grocery store for you
31	1	0	take off the dishes after meals
3	1	0	put clean clothes into the right drawers or shelves

6. HOW OFTEN DO YOU JOIN IN THE PLAY ACTIVITIES THAT ______________
(Child's Name)
IS INVOLVED IN, SUCH AS PLAYING GAMES, DRAWING PICTURES, OR SINGING?

3 Would you say: 3 almost every day
or: 2 once a week or so
or: 1 not that often?

7. HOW MUCH TIME DOES ______________ WATCH TELEVISION?
(Child's Name)

34 Would you say: 3 about 2 hours a day or more
or: 2 every day but not for two hours
or: 1 several times a week or less?

8. HOW OFTEN DO YOU TALK WITH ______________ ABOUT HIS (HER) FEELINGS TOWARDS THINGS, SUCH AS HIS (HER) FEARS, PEOPLE OR THINGS HE (SHE) ESPECIALLY LIKES, OR PEOPLE OR THINGS HE (SHE) ESPECIALLY DOESN'T LIKE?
(Child's Name)

5 Would you say: 3 almost every day
or: 2 several times a week
or: 1 not that often?

9. I AM GOING TO READ TO YOU A LIST OF THINGS CHILDREN CAN PLAY WITH. PLEASE TELL ME WHICH ONES ______________ HAS A CHANCE TO PLAY WITH AT HOME.
(Child's Name)

Check "yes" only if item is presently available in home.

	Yes	No	
36	1	0	crayons and paper
37	1	0	scissors
38	1	0	scotch tape, paste, or stapler
39	1	0	jigsaw puzzles
40	1	0	old picture catalogs to read,and cut up, like Sears, Wards, or others
41	1	0	paint or magic markers
42	1	0	clay or playdough
43	1	0	"put-together" toys like tinkertoys, Legos, pegboards, or beads for stringing
44	1	0	hammer and nails with some wood scraps
45	1	0	yarn, thread, and cloth scraps for knitting or sewing
46	1	0	make believe toys out of milk cartons, tin cans, or egg cartons
47	1	0	plants of his (her) own in a pot or garden

10. HOW OFTEN DO YOU PLAY "HOUSE", "STORE", "DOCTOR", OR OTHER MAKE-BELIEVE GAMES WITH ______________ ?
(Child's Name)

48 Would you say: 3 almost every day
or: 2 several times a week
or: 1 not that often?

11. NOW I'M GOING TO READ A LIST OF THINGS CHILDREN START TO LEARN AS THEY GROW TO BE SCHOOL AGE. PLEASE TELL ME WHICH OF THE YOU HAVE TRIED TO TEACH ______________ IN THE PAST MONTH.
(Child's Name)

If reply is "already knows," probe for "in the past month." If someone other than focal parent taught child, score "

	Already Knows	Yes	No	
49	1	1	0	nursery rhymes, prayers, or songs
50	1	1	0	colors
51	1	1	0	shapes, such as circles, squares, or triangles
52	1	1	0	to write his (her) name
53	1	1	0	to remember his (her) address and telephone number
54	1	1	0	to count things
55	1	1	0	to recognize numbers in books
56	1	1	0	to say the "abc's"
57	1	1	0	to recognize letters in books
58	1	1	0	to read words on signs or in books
59	1	1	0	ideas like "big-little", "up-down", "before-after", and so c

Be sure to record time finished

PARENT'S INTERVIEW SCHEDULE - PART I

PARENT'S INTERVIEW SCHEDULE - PART I

21-22 = "01" 1. Do you have any other children? (Circle response given)

23 (2) no

24-25 (1) yes

└→ How many? ☐☐ (enter number)

2. Do any of these other children have handicaps or special learning problems? (Circle response given)

26 (2) no

(1) yes

3. Is this child: (circle one)

27 1 First Born 3 Only Child

2 Last Born 4 Other

4. Does your child receive any special services other than those provided by ______________________________ (name of program).

28 (2) no

(1) yes

└→ What kind of services?

29-30 ______________________________ (Interviewer: Record verbatim. Answers will be coded at a later dat

31-32 ______________________________

33-34 ______________________________

5. Was your child ever enrolled in another program similar to the one s/he is currently enrolled in?

35 2 no

1 yes

5a. What kind of program was it?

36 1 Home-based, Head Start

37, 38-39 2 Home-based, Other ____________________

40 3 Infant stimulation program

41 4 Easter Seal Treatment Center

42 5 Association for Retarded Children (center-based)

43 6 BEH First Chance Project

44 7 Public School Preschool (center-based)

45, 46-47 8 Other, specify ____________________

5b. How many years was your child enrolled? (Total time in all previous programs)

1 less than 1 year

48 2 1 year

3 2 years

4 3 years or more

6. Do you participate in activities sponsored by your child's program?

49 2 no

1 yes

6a. How often are you involved?

1 1-3 hours a month

50 2 2-3 hours a week

3 4 or more hours a week

6b. What kinds of activities are you involved in? (Check all that apply)

51 ____ provide transportation for my child or other children

52 ____ train or counsel other parents (i.e., a parent trained in a skill shares that skill with other parents)

53 ____ involved in outreach and recruitment of other handicapped children

54 ____ involved in developing a community resource file

55 ____ helped develop goals for social services and parent involvement activities

56 ____ function as a contact between my child's program and other service agency(ies)

57 ____ contributed by making or donating materials for the classroom

58 ____ involved in functions with parents of other normal Head Start children (social functions, class functions, etc.)

59 ____ other (specify) ____________________

60 ____ other (specify) ____________________

7. How often do you talk to your child's teacher or the program director about your child? (Interviewer: Code response below)

1 at least weekly

61 2 2-3 times a month

3 monthly

4 several times a year

5 rarely or never

8. How important do you think it is for your child to be in a special program designed to meet his/her special needs? (Interviewer: Make certain the respondent understands the intent of this question)

1 Very important

62 2 Somewhat important

3 I don't know

4 Somewhat unimportant

5 Very unimportant

9. Do you think the program your child is currently in is the best program for him/her?

63 2 no

1 yes

8a. What program do you think would be best?

64-65 ______________________________ (Interviewer: Write in verbatim)

66-67 ______________________________

10. Do you think your child will benefit from the program he/she is in this year? (Interviewer: Benefit may be defined in terms of increased learning, better social skills, and/or enhanced self-help skills)

4 I don't know

68 3 no

2 yes, but only a little

1 yes, he/she will benefit greatly

11. Where do you expect your child to be enrolled in school next year?

69 1 Public school

70 2 Head Start

71, 72-73 3 Private school (specify) ____________________

74, 75-76 4 Other (specify) ____________________

77 5 No program

1-22 = "02" Now I'd like to ask you some general questions about yourself. This information will be kept strictly confidential and will not be told to anyone. You do not have to answer any of these questions, but it would help us in the study if you would answer them. Thank you.

12. What is the highest level of education you have completed? (Interviewer: Code response below)

23
1 less than high school
2 high school graduate
3 some college, but not a 4-year degree
4 college graduate
5 postgraduate study/degree

12a. Your spouse?

24 ☐ (Interviewer: Enter code from #12)

25-26 13. What is your occupation?

______________________________ (Interviewer: Record verbatim)

7-28 13a. What do you do in your job?

______________________________ (Interviewer: Record verbatim)

9-30 14. What is your spouse's occupation?

______________________________ (Interviewer: Record verbatim)

1-32 14a. What does your spouse do in his/her job?

______________________________ (Interviewer: Record verbatim)

15. Here is a card showing income groups (Interviewer: Hand card to parent) Tell me the number of the group which represents your family's total annual income, before taxes.

1 Under $5,000

3

2 $5,000 - $10,000

3 $10,000 - $15,000

4 Over $15,000

PARENT'S INTERVIEW SCHEDULE - PART II
(For Mainstreaming Classes Only)

			Yes	Can't Say	No
34	1	I feel my child could do better in a more specialized program for her/his type of handicap.	1	2	3
35	2	I think other children don't like to be in the same class with handicapped children.	1	2	3
36	3	I think my child gets along better at home since she/he has been in school with children who don't have handicaps.	3	2	1
37	4	I think it's best for handicapped children to be in a classroom with children who don't have handicaps.	3	2	1
38	5	I think my child would have more friends if she/he were in a class of children with similar handicaps.	1	2	3
39	6	I think that handicapped children in classes with other children get along better with other people.	3	2	1
40	7	Handicapped children are more like other children than different.	3	2	1
41	8	I think my child is afraid to try when she/he is competing with other children.	1	2	3
42	9	I think children without handicaps are less likely to make fun of handicapped children if they're in the same class together.	3	2	1

SHAEFER PARENT INVENTORY I

SHAEFER PARENT INVENTORY I

Check the number of the response that most closely reflects how you really feel about each statement. There are no right or wrong answers.

	Strongly Disagree	Midly Disagree	Not Sure	Midly Agree	Strongly Agree	21-22="01"
1. Parents can do much about Center policies and practices.	1____	2____	3____	4____	5____	23
2. I am eager to have the teacher's ideas about how I can work with my child.	1____	2____	3____	4____	5____	24
3. Parents cannot do much to change what happens in my child's classroom.	1____	2____	3____	4____	5____	25
4. I want the teacher to tell me how to help my child learn.	1____	2____	3____	4____	5____	26
5. There is not much hope that parents can have a meaningful effect on the center.	1____	2____	3____	4____	5____	27
6. I want the teacher to help me to do a better job of teaching my child at home.	1____	2____	3____	4____	5____	28

(educational beliefs)		Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree	
1.	The most important thing to teach children is absolute obedience to parents	1___	2___	3___	4___	5___	29
2.	Although adults may have difficulty accepting them, all children are basically good at heart	1___	2___	3___	4___	5___	30
3.	Teachers should show the same amount of affection to all the children	1___	2___	3___	4___	5___	31
4.	The most important thing to teach children is absolute obedience to whoever is in authority	1___	2___	3___	4___	5___	32
5.	A child learns best by doing things himself rather than listening to others	1___	2___	3___	4___	5___	33
6.	One of the worst things about taking care of children is that a woman feels that she can't get out	1___	2___	3___	4___	5___	34
7.	Children should always obey their parents	1___	2___	3___	4___	5___	35
8.	All children are good by nature	1___	2___	3___	4___	5___	36
9.	Teachers should give all children an equal amount of praise	1___	2___	3___	4___	5___	37
10.	Children should always obey the teacher	1___	2___	3___	4___	5___	38
11.	Basically, a child learns by exploring the world around him	1___	2___	3___	4___	5___	39
12.	Most mothers are bothered more by the feeling of being shut up in the home than by anything else	1___	2___	3___	4___	5___	40
13.	Children should not question the authority of their parents	1___	2___	3___	4___	5___	41
14.	Children are born good; it is society that turns some children into troublemakers	1___	2___	3___	4___	5___	42

		Strongly Disagree	Mildly Disagree	Not Sure	Mildly Agree	Strongly Agree	
15.	Teachers should discipline all the children the same	1___	2___	3___	4___	5___	43
16.	Children should not question the authority of the teacher	1___	2___	3___	4___	5___	44
17.	Children are naturally curious and will learn well unless barriers are placed in their way	1___	2___	3___	4___	5___	45
18.	One of the bad things about raising children is that you don't have much free time to do just as you like	1___	2___	3___	4___	5___	46
19.	Children should always do what their parents say, no matter what	1___	2___	3___	4___	5___	47
20.	In order to be fair, a teacher must treat all children alike	1___	2___	3___	4___	5___	48
21.	Children should always do what the teacher says, no matter what	1___	2___	3___	4___	5___	49
22.	A mother feels "held down" because she is missing out on things while she stays at home with her children	1___	2___	3___	4___	5___	50
23.	Children should be treated the same regardless of differences among them	1___	2___	3___	4___	5___	51

PRESCOTT-SRI RECORDING BOOKLET

This instrument does not require OMB forms clearance; but the study is authorized under:

OMB # 85-S77002

Expires 12/31/78

EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO HEAD START

APPLIED MANAGEMENT SCIENCES, INC.

PHASE II

PRESCOTT - S.R.I.

1. Grantee ______________________________
2. Delegate Agency ______________________________
3. Alternate Program ______________________________

CARD COLUMN		
	Program Code	
1-5	☐☐☐☐☐	
	Child Code	
6-11	☐☐☐☐☐☐	
	Form Number	
12-13	1 4	

Respondent:

____
(Position/Title)

Program Name:

____

____

Interview Date ___/___/___

Interviewer ______________________________

____

CHILD OBSERVATION SYSTEM

Prescott-S.R.I.

7072

FOR NCS USE ONLY

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

DIRECTIONS: Make sure that all of the identifying information has been entered in this form prior to any observation. In places where written information is required, do not make any stray marks outside the boxes provided. Be sure to code the booklet identification Number in the I.D. grid of all booklets used in the observation.

CHILD NUMBER

0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

DATE

MO.		DAY		YR.	
0	0	0	0	0	
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

BOOKLET NUMBER

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

OBSERVER NUMBER

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Teacher ____________________

Center ____________________

City ____________________

Observer ____________________

250

NUMBER CHILDREN PRESENT			NUMBER ADULTS PRESENT		SEQ. NO.		FOCUS CHILD I.D.						
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9

TIME STARTED

HOUR	MINUTE	
6 7 8 9 10 11 12	0 1 2	0 1 2 3 4
1 2 3 4 5 6 7 8	3 4 5	5 6 7 8 9

1

Ind.	Mod.	Child Codes				Obj.	Cont.	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

2

Ind	Mod.	Child Codes				Obj.	Cont	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

3

Ind.	Mod.	Child Codes				Obj.	Cont.	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

4

Ind	Mod	Child Codes				Obj.	Cont.	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

5

Ind	Mod	Child Codes				Obj.	Cont.	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

6

Ind.	Mod	Child Codes				Obj.	Cont	Resp
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

7

Ind.	Mod.	Child Codes				Obj	Cont	Resp
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

8

Ind.	Mod.	Child Codes				Obj.	Cont	Resp
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

9

Ind.	Mod	Child Codes				Obj	Cont	Resp
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

10

Ind.	Mod.	Child Codes				Obj.	Cont	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

11

Ind	Mod	Child Codes				Obj.	Cont.	Resp.
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

12

Ind.	Mod.	Child Codes				Obj.	Cont.	Resp
AS	RP DL	I	1 5	a	Ns	A D	N	1 5
TT		T	2 6	b		C	O	2 6
NC		R	3 7	c		E	R	3 7
Ca		D	4 8	d		G	NA	4 8

ALPERN-BOLL DEVELOPMENTAL PROFILE

ALPERN-BOLL DEVELOPMENTAL PROFILE - TEACHER SHORT FORM

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This instrument does not require OMB forms clearance; but the study is authorized under:

OMB # 85-S77002

Expires 12/31/73

EVALUATION OF THE PROCESS OF MAINSTREAMING HANDICAPPED CHILDREN INTO HEAD START

APPLIED MANAGEMENT SCIENCES, INC.

PHASE II

ALPERN-BOLL DEVELOPMENTAL PROFILE

TEACHER FORM

1. Grantee ______________________________

2. Delegate Agency ______________________________

Program Code

1-5 ☐☐☐☐☐

Child Code

6-11 ☐☐☐☐☐☐

Form Number

12-13 | 1 | 5 |

Respondent:

____
(Position/Title)

Program Name:

____

____

Interview Date ___/___/___

Interviewer ______________________________

____

Directions

This revised form of the Developmental Profile is designed to provide information of a child's development in five broad areas: Physical, Self-Help, Social, Academic, and Communication. The results are not absolutes, but can be interpreted as reasonable indicators. Age in each of the five areas are expressed in months, i.e., 36 months instead of 3 years, or 52 months instead of 4 years, 4 months.

To administer, begin with Scale 1, Item 1 (I-1) of the Profile. The question can be answered by a "yes" or "no". Circle the number in the "yes" column if the child can do or does what it says. Circle the number in the "no" column if the child cannot. Continue this procedure until you have obtained 6 consecutive "no" responses. Stop! Go to Scale II, Item 1 (II-1) and begin, continue until you have 6 consecutive "no" answers. Continue this procedure through Scale V.

If you are not sure of an answer, check to see if someone else can answer, or test the child by asking him to try it. If the question asks about something the child has never done, test, or make your best guess as to whether or not he could.

Remember that these questions are designed for children age 1 1/2 through age seven. Several questions refer to abilities the young child has not yet developed, so do not be surprised if there are many questions answered "no."

Date____________________

Program____

Center (name or location)____________________________

Teacher____

Child's name____________________________________

Birthdate______________________________________

Comments:

Questions used with author's permission, from: Developmental Profile,
1972. Authors: Gerald D. Alpern
Thomas J. Boll, Ph.D.

SCALE I

Circle the number in the "Yes" column for every question which the child, in your best judgment, can do. Circle the "0" in the "No" column for every question which he cannot or does not do.

		Yes	No
I-1	Does the child go upstairs taking one stair with each foot? He must alternate going upstairs but may still be putting two feet on each step going downstairs.	3	0
I-2	Does the child ride a 3-wheeler using the pedals for at least 10 feet and turning wide corners?	3	0
I-3	If you were to draw a straight line for the child, could he copy it using a pencil, crayon, or paintbrush? (The question is whether the child has enough eye-hand ability to copy a line instead of just scribble.)	3	0
I-4	Does the child jump with both feet together from a step or box (which is at least eight inches off the floor) without falling? (Try to observe.)	3	0
I-5	Does the child use scissors with one hand to cut paper or cloth? The child must be able to use the scissors to cut rather than merely tear.	3	0
I-6	Can the child hop on one foot for at least five feet? (Not in one hop!)	3	0
I-7	Can the child throw a ball (any size) to an adult standing five feet away well enough so that the adult can catch it without having to move?	3	0
I-8	Does the child release the latch and open an inside door? He must be able, for instance, to twist a doorknob and push open an unlocked bathroom door.	3	0
I-9	Does the child catch a ball (any size) thrown by an adult standing five feet away? The child must catch the ball 50% of the time.	6	0
I-10	Can the child hop on one foot for at least 10 feet without having to stop and start again? (Try to observe.)	6	0
I-11	Can the child use a key to open and unlock a small padlock?	6	0
I-12	Can the child make a snowball or mudball solid enough to stay together when thrown at least eight feet? The ability to throw a snowball or mudball eight feet is necessary to rate a pass.	6	0
I-13	Does the child roller skate or ice skate? Skating means the child can push and glide with one foot after another. There can be occasional falls but most of the time the child can travel long distances without falling.	6	0
I-14	Can the child cut out a magazine picture of an animal or human without being more than a quarter of an inch off anywhere? (Need to observe.)	6	0
I-15	Can the child pick up and carry a kitchen or dining-room chair from one room to another? (Pushing or dragging does not rate a "yes.")	6	0
I-16	Can the child catch a ball (tennis size) with one hand when thrown gently from at least six feet away? (The child must catch it at least 50% of the time.) (Size of ball is important on this.)	6	0

SCALE II

Circle the number in the "Yes" column for every question which the child, in your best judgment, can do. Circle the "0" in the "No" column for every question which he cannot or does not do.

		Yes	No
II-1	Does the child take off his own coat without help when buttons or zippers are undone?	3	0
II-2	Does the child use a fork for eating solid foods when a fork is available to him? He may prefer a spoon but has shown the ability to use a fork.	3	0
II-3	Does the child understand and stay away from common dangers? He may take care not to fall on stairs or from high places, or he may show that he knows the danger of things such as broken glass, busy streets, or strange animals.	3	0
II-4	Does the child completely feed himself using a fork and/or spoon and glass in the right way?	3	0
II-5	Does the child undo large buttons, snaps, shoelaces, and zippers?	3	0
II-6	Does the child put on his own shoes? It is not necessary that the child put them on the right feet or tie or fasten them to pass this item.	3	0
II-7	Does the child care for his own toilet needs without help? This means that he must undress, wipe, and dress himself. The child does not have to be able to fasten back buttons or tie bows to rate a "yes" on this item.	3	0
II-8	Does the child usually wash his own face and hands acceptably and dry them without help?	3	0
II-9	Does the child dress himself completely except for tying shoelaces and other difficult fastenings? The child must manage regular shirt or blouse buttons and zippers.	6	0
II-10	Can the child fix a bowl of dry cereal for himself? This must include getting the bowl and the cereal and pouring both cereal and milk into the bowl.	6	0
II-11	Does child usually use a table knife for putting butter or jam on bread or crackers?	6	0
II-12	Does the child answer the telephone and tell the person called the right message? The child must say "hello" and say whether the person called can come to the phone.	6	0
II-13	Does the child use a knife correctly for cutting foods? He may be helped with unground meats such as steaks, roasts, chicken or chops.	6	0
II-14	Does the child brush or comb his hair well enough so that adult help is not usually needed except for special times.	6	0
II-15	Has the child, by himself, built or mended something requiring real tools such as needle and thread or hammer and nails? Adults may have helped only with directions, not any of the work. (Examples: Sewing up a seam or fixing a wagon.)	6	0
II-16	Does the child wash himself acceptably without help? This means getting bath or shower ready and washing and drying himself completely.	6	0

Circle the number in the "Yes" column for every question which the child, in your best judgment, can do. Circle the "0" in the "No" column for every question which he cannot or does not do.

		Yes	No
III-1	Is the child able to play with an easily breakable toy without destroying it right away? The toy may eventually be broken, but the child must show that he knows the right way to use the toy and be able to play with it once or twice without breaking it.	3	0
III-2	Does the child seem interested in exploring new places such as a friend's house or places in his own home or yard which are new to him? Exploration with eyes alone is not sufficient for "yes" on this item.	3	0
III-3	Does the child show he knows his own sex or the sex of others by telling what someone's sex is? He rates "yes" by showing he knows that certain clothes, activities, or toys usually go with one sex or another. (Uses boy, girl, etc.)	3	0
III-4	Does the child like to help the parents around the house? Does he enjoy such activities as picking up from the floor, putting raked leaves in a basket, setting or clearing the table?	3	0
III-5	Is the child able to take turns? Although he may need some help, he understands the idea of waiting for someone else to go first; he is able to allow others to go first before he takes his turn 75% of the time.	3	0
III-6	Does the child know what toys can and cannot do and does he use them in a way that would not break them? For example, he does not drag a wagon on its top instead of its wheels, does not use a toy gun for chopping down a tree, and knows that cardboard toys cannot be stepped on. Any of these things may once in a while happen, but they don't usually happen.	3	0
III-7	Does the child play with other children in group games such as tag, hide-and-seek, hopscotch, jumprope, marbles or other popular games without needing constant watching by an adult?	3	0
III-8	Is the child able to keep "working" for at least 30 minutes with a similar-aged child in a single task such as making buildings or roads with blocks, logs, sand or mud or rearranging a room or area for doll-play such as store, school or house?	3	0
III-9	Does the child draw a person so that an adult could tell what he drew? It need not be a whole man but should have a head and a body or a head and eyes, nose or mouth which any adult could recognize. (Try to observe.)	6	0
III-10	Is the child allowed to play in his own neighborhood without being watched by an adult or babysitter? This does not mean the child is allowed to cross the street by himself.	6	0
III-11	Boys: Does the boy engage in bike riding, ball throwing, playing at a creek or woods or field or hiking in a loosely-organized boy group? Girls: Does she play with girlfriends at least once a week in some activity like house, shopping or nurse? No rules or scores are needed and the activity is just one where the child prefers to be with friends of his or her own sex.	6	0
III-12	Does the child show he knows how others feel by saying things like "He is mad," "He is angry," "She is afraid," or "You are cranky?" The child must be usually right in the feelings he names in order to rate a "yes."	6	0
III-13	Does the child have a friend to whom he will tell things he would not tell to parents or other adults? This does not mean merely acting silly with friends but rather telling secrets to another child that he does not want to talk about with adults.	6	0
III-14	Does the child play easy table games such as checkers, Old Maid, Candy Land, or Lotto with a friend of about the same age? The child should be able to follow the rules, take turns, and have a "winner."	6	0
III-15	Does the child have at least one real chore which he has to do at least weekly, such as washing dishes, mowing lawns, making a bed, taking out garbage cans, or some cleaning or dusting? This should be done well and usually without urging more than two times.	6	0
III-16	Does the child know about voting as a way of deciding something? The child must understand that things are to be done in accordance with the way most of the people vote.	6	0

SCALE IV

Circle the number in the "Yes" column for every question which the child, in your best judgment, can do. Circle the "0" in the "No" column for every question which he cannot or does not do.

		Yes	No
IV-1	Does the child name or point to at least 20 objects or pictures when they are named for him?	3	0
IV-2	Does the child recognize himself in a photograph?	3	0
IV-3	In the child's play does he ever group things together by color or form or size?	3	0
IV-4	Does the child use size words (large, big, little, small) often and correctly? Only using the word in some game (e.g., how big is baby?) is not enough to rate a "yes."	3	0
IV-5	Does the child understand the concept of three well enough so that he can hand you three pieces from a bowl of candy?	3	0
IV-6	Does the child copy a picture of a circle? The child may make a mark going round and round. To pass, he has only to make a circular arm and hand movement.	3	0
IV-7	Does the child count to six? That is, if there are six things in front of him and he is asked to tell how many, he can usually count them correctly.	3	0
IV-8	Does the child draw a cross, one vertical and one intersecting horizontal line (+), after an adult makes one?	3	0
IV-9	When asked to draw a person or when drawing a picture of a person on his own, does the child draw a head that looks like a head and at least one other part of the body?	6	0
IV-10	Does the child draw or copy a square? The square must have right angle corners and the sides of the square should be about of equal size.	6	0
IV-11	Has the child drawn a picture of a person that looked to an adult like a person? The drawing must have had the following bodily features: a trunk and arms or legs. Even if the trunk, arms and legs were shown in stick figure form the child should receive a "yes."	6	0
IV-12	Does the child either copy or draw on his own a triangle? The sides of the triangle need not be exactly the same length but should be roughly so.	6	0
IV-13	Could the child take out 13 objects from a group of 20 objects when asked?	6	0
IV-14	Does the child know his address? In the city, he should be able to give his street and house number or he may name some well known place (apartment). Rural or isolated addresses may be more general, but should provide mailing information (e.g., road, box, or route number). The child need not know the name of his city or suburb.	6	0
IV-15	Does the child print or write words using both capital and small letters correctly? These letters may be about the same size, but there should be a difference in form.	6	0
IV-16	Can the child name the seven days of the week and also answer which day comes before and after any given day? For example, the child must be able to tell you what day comes before and after Thursday.	6	0

SCALE V

Circle the number in the "Yes" column for every question which the child, in your best judgment, can do. Circle the "0" in the "No" column for every question which he cannot or does not do.

		Yes	No
V-1	Does the child use at least 15 different words in the right way?	3	0
V-2	Does the child put two or more words together to form sentences? "Me go," "You give," "Tom want," are all examples of passes. But, if the child always uses the two words together (so that they are really one word to him), then this should be answered "no."	3	0
V-3	Does the child name (not just repeat) at least 20 things seen in pictures?	3	0
V-4	Does the child use at least 50 different words when he speaks? He must use these words, not just understand them when spoken by others.	3	0
V-5	Does the child sometimes give his first and last name when asked? The child may not do this all or even most of the time, but must have done it when asked.	3	0
V-6	Does the child answer correctly when asked if he or she is a boy or girl?	3	0
V-7	Can the child tell a story as he looks at the pictures in a book? The story must be what is pictured as he goes through the book, although he may leave out parts of the story not shown by the pictures.	3	0
V-8	Has the child talked with someone on the telephone? For a "yes" the child must have listened for talk from the other end and waited until the other person stopped talking before answering or speaking.	3	0
V-9	Has the child sung a song of at least 30 words? Many of the words can be repeated in the song, but it must have been sung all by himself.	6	0
V-10	Can the child tell people (by speaking or holding up fingers) how old he is now, how old he was last year, and how old he will be next year?	6	0
V-11	Does the child tell (without pictures for help) a story such as "Little Red Riding Hood" or "The Three Bears"? The child must tell all the important parts of the story.	6	0
V-12	When arguing, has the child sometimes used logic about cause and effect? He may use the words "because" or "since." For example, "I ought to be able to watch T. V. later tonight because there is no school tomorrow." This is acceptable as it shows cause and effect logic.	6	0
V-13	Can the child recognize at least five written words and somehow show he understands what they mean? The child must "read" the words not just name the things like recognizing a cereal box and naming the cereal.	6	0
V-14	Does the child recite the entire "Pledge of Allegiance" or something like it? The child must have learned some formal prayer or poem of at least 25 mostly non-repeated words. Songs cannot be used to pass this item.	6	0
V-15	Does the child read aloud (really reading the words) a simple story so that someone who is only listening can follow the story?	6	0
V-16	Could the child retell (using about five minutes) the plot of a story, play or T. V. show he watched? The child must be able to tell the whole story (not exciting bits of action) in enough detail to require five minutes.	6	0

APPENDIX III

FREQUENCY TABLES FOR DEMOGRAPHIC DATA

FREQUENCIES BY PROGRAM TYPE FOR PARENT INTERVIEW SCHEDULE

FREQUENCIES BY PROGRAM TYPE FOR THE PARENT'S INTERVIEW SCHEDULE - PART I

Head Start % of Column	Non-Head Start Programs % of Column	Non-Served % of Column	
			1. Do you have any other children? (Circle response given)
83.7 (N=339)	78.8 (N=278)	18.8 (N=29)	(2) no
16.3 (N=270)	21.2 (N=75)	81.2 (N=125)	(1) yes
			└→ How many? ☐☐ (enter number)
			2. Do any of these other children have handicaps or special learning problems? (Circle response given)
57.6 (N=267)	63.5 (N=224)	55.8 (N=86)	(2) no
26.1 (N=112)	15.3 (N=54)	18.8 (N=39)	(1) yes
16.3 (N=70)	21.2 (N=75)	18.8 (N=29)	Not specified
			3. Is this child: (circle one)
31.9 (N=137)	29.5 (N=104)	24.0 (N=37)	1 First Born 6.1 (N=26) 9.3 (N=33) 9.1 (N=14) 3 Only Child
38.7 (N=166)	42.8 (N=151)	46.1 (N=71)	2 Last Born 23.3 (N=100) 18.4 (N=65) 20.8 (N=32) 4 Other
			4. Does your child receive any special services other than those provided by ______________________ (name of program).
66.9 (N=287)	72.0 (N=254)	64.3 (N=99)	(2) no
33.1 (N=142)	28.0 (N=99)	35.1 (N=54)	(1) yes
			└→ What kind of services?
	See text		______________________ ______________________ ______________________ (Interviewer: Record verbatim. Answers will be coded at a later date)
•	•	0.6 (N=1)	Not specified

5. Was your child ever enrolled in another program similar to the one s/he is currently enrolled in?

75.3 (N=323)	68.6 (N=242)	87.0 (N=134)	2 no
24.7 (N=106)	31.4 (N=111)	13.0 (N=20)	1 yes

5a. What kind of program was it?

1.6 (N=7)	2.0 (N=7)	*	1 Home-based, Head Start
0.9 (N=24)	2.8 (N=10)	1.3 (N=2)	2 Home-based, Other ________
0.9 (N=4)	5.1 (N=18)	1.3 (N=2)	3 Infant stimulation program
1.4 (N=6)	2.8 (N=10)	1.3 (N=2)	4 Easter Seal Treatment Center
1.4 (N=6)	1.1 (N=4)	1.3 (N=2)	5 Association for Retarded Children (center-based)
*	0.3 (N=1)	*	6 BEH First Chance Project
1.9 (N=8)	0.6 (N=2)	*	7 Public School Preschool (center-based)
17.0 (N=73)	19.0 (N=67)	9.7 (N=15)	8 Other, specify ________

5b. How many years was your child enrolled? (Total time in all previous programs)

8.4 (N=36)	11.3 (N=40)	6.5 (N=10)	1 less than 1 year
8.2 (N=35)	9.1 (N=32)	3.2 (N=5)	2 1 year
5.6 (N=24)	7.4 (N=26)	1.3 (N=2)	3 2 years
2.6 (N=11)	4.0 (N=14)	0.6 (N=1)	4 3 years or more

6. Do you participate in activities sponsored by your child's program?

35.0 (N=150)	32.6 (N=115)	NA	2 no
65.0 (N=279)	67.4 (N=238)	NA	1 yes

6a. How often are you involved?

37.5 (N=161)	40.5 (N=143)	NA	1 1-3 hours a month
16.1 (N=69)	18.1 (N=64)	NA	2 2-3 hours a week
11.4 (N=49)	8.8 (N=31)	NA	3 4 or more hours a week

6b. What kinds of activities are you involved in? (Check all that appl

12.8 (N=56)	24.9 (N=88)	NA	___ provide transportation for my child or other children
4.7 (N=20)	4.5 (N=16)	NA	___ train or counsel other parents (i.e., a parent trained in a skil shares that skill with other parents)
4.0 (N=17)	4.0 (N=14)	NA	___ involved in outreach and recruitment of other handicapped childr
1.6 (N=7)	1.4 (N=5)	NA	___ involved in developing a community resource file
7.9 (N=34)	9.1 (N=32)	NA	___ helped develop goals for social services and parent involvement activities
5.1 (N=22)	4.2 (N=15)	NA	___ function as a contact between my child's program and other service agency(ies)
25.6 (N=110)	19.0 (N=67)	NA	___ contributed by making or donating materials for the classroom
39.6 (N=170)	15.3 (N=54)	NA	___ involved in functions with parents of other normal Head Start children (social functions, class functions, etc.)
	40.2 (N=142)	NA	___ other (specify) ________
22.6 (N=140)		NA	___ other (specify) ________

7. How often do you talk to your child's teacher or the program director about your child? (Interviewer: Code response below)

49.9 (N=214)	51.6 (N=182)	NA	1 at least weekly
20.3 (N=87)	22.1 (N=78)	NA	2 2-3 times a month
15.4 (N=66)	12.5 (N=44)	NA	3 monthly
5.8 (N=25)	10.8 (N=38)	NA	4 several times a year
8.6 (N=37)	3.1 (N=11)	NA	5 rarely or never

8. How important do you think it is for your child to be in a special program designed to meet his/her special needs? (Interviewer: Make certain the respondent understands the intent of this question)

71.8 (N=308)	85.8 (N=303)	70.1 (N=108)	1 Very important
4.9 (N=21)	4.0 (N=14)	9.1 (N=14)	2 Somewhat important
5.1 (N=22)	2.0 (N=7)	10.4 (N=16)	3 I don't know
5.4 (N=23)	-	4.5 (N=7)	4 Somewhat unimportant
12.8 (N=55)	8.2 (N=29)	5.2 (N=8)	5 Very unimportant

9. Do you think the program your child is currently in is the best program for him/her?

7.9 (N=34)	7.1 (N=25)	NA	2 no
92.1 (N=395	92.9 (N=328)	NA	1 yes

→ 9a. What program do you think would be best?

________________________ (Interviewer: Write in verbatim)

____

10. Do you think your child will benefit from the program he/she is in this year? (Interviewer: Benefit may be defined in terms of increased learning, better social skills, and/or enhanced self-help skills)

2.1 (N=9)	2.3 (N=8)	NA	4 I don't know
0.2 (N=1)	0.8 (N=3)	NA	3 no
7.2 (N=31)	6.8 (N=24)	NA	2 yes, but only a little
90.4 (N=388)	90.1 (N=318)	NA	1 yes, he/she will benefit greatly

11. Where do you expect your child to be enrolled in school next year?

60.8 (N=361)	33.4 (N=118)	30.5 (N=47)	1 Public school
27.3 (N=117)	9.3 (N=12)	11.7 (N=18)	2 Head Start
2.3 (N=10)	5.9 (N=21)	20.1 (N=31)	3 Private school (specify) ________________
9.1 (N=39)	56.7 (N=200)	27.9 (N=43)	4 Other (specify) ________________
0.2 (N=1)	0.6 (N=2)	9.7 (N=15)	5 No program

Now I'd like to ask you some general questions about yourself. This information will be kept strictly confidential and will not be told to anyone. You do not have to answer any of these questions, but it would help us in the study if you would answer them. Thank you.

49.4 (N=212)	23.8 (N=84)	36.4 (N=56)
33.6 (N=144)	42.8 (N=157)	41.6 (N=64)
14.2 (N=61)	22.9 (N=81)	16.9 (N=26)
1.9 (N=8)	5.4 (N=19)	3.9 (N=6)
0.9 (N=4)	5.1 (N=18)	1.3 (N=2)

12. What is the highest level of education you have completed? (Interviewer: Code response below) Spouse

1 less than high school

2 high school graduate

3 some college, but not a 4-year degree

4 college graduate

5 postgraduate study/degree

12a. Your spouse?

☐ (Interviewer: Enter code from #12)

See Tables in text

13. What is your occupation?

________________________ (Interviewer: Record verbatim)

13a. What do you do in your job?

________________________ (Interviewer: Record verbatim)

14. What is your spouse's occupation?

________________________ (Interviewer: Record verbatim)

14a. What does your spouse do in his/her job?

________________________ (Interviewer: Record verbatim)

2.3 (N=10)	0.8 (N=3)	0.6 (N=1)
44.5 (N=191)	20.7 (N=73)	28.6 (N=44)
35.2 (N=151)	25.5 (N=90)	37.0 (N=32)
11.9 (N=51)	30.0 (N=106)	20.8 (N=32)
6.1 (N=26)	22.9 (N=81)	13.0 (N=20)

15. Here is a card showing income groups (Interviewer: Hand card to parent) Tell me the number of the group which represents your family's total annual income, before taxes.

0

1 Under $5,000

2 $5,000 - $10,000

3 $10,000 - $15,000

4 Over $15,000

FREQUENCIES BY PROGRAM TYPE FOR
CASE BACKGROUND DATA PROFILE

FREQUENCIES FOR CASE BACKGROUND DATA PROFILE BY PROGRAM TYPE

1. WHAT IS THIS CHILD'S BIRTH DATE?

☐☐ *(month)* ☐☐ *(day)* ☐☐ *(year)*

1a. This child's age today is:

☐ years and ☐☐ months

(Interviewer: Calculate child's age subtracting birthdate from today's date)

2. WHAT IS THIS CHILD'S PRIMARY HANDICAPPING CONDITION? *(Circle one)*

	Head Start % of Column	Non-Head Start Programs % of Column	Non-Served % of Column
1 visually impaired	4.7 (N=20)	0.6 (N=2)	1.9 (N=3)
2 blind	0.2 (N=1)	0.6 (N=2)	1.9 (N=3)
3 hearing impaired	4.4 (N=19)	3.1 (N=11)	1.2 (N=2)
4 deaf	1.2 (N=5)	0.6 (N=2)	0.6 (N=1)
5 physical handicap	18.6 (N=80)	18.3 (N=65)	16.2 (N=25)
6 speech impaired	28.9 (N=124)	15.3 (N=54)	39.6) (N=61)
7 health or developmentally impaired	17.2 (N=74)	8.8 (N=31)	12.4 (N=19)
8 mentally retarded	6.3 (N=27)	6.8 (N=24)	0.0
9 specific learning disability	7.0 (N=30)	9.3 (N=33)	6.6 (N=10)
10 serious emotional disturbance			10.4 (N=16)

3. WHAT IS THE SEVERITY OF THIS CHILD'S PRIMARY HANDICAP? *(Circle one)*

	Head Start % of Column	Non-Head Start Programs % of Column	Non-Served % of Column
1 mild	31.7 (N=136)	23.5 (N=83)	N/A
2 moderate	39.3 (N=170)	34.5 (N=122)	N/A
3 severe	24.9 (N=107)	30.8 (N=107)	N/A
4 profound	2.8 (N=12)	10.1 (N=37)	N/A
5 not relevant *(deaf and blind only)*	0.9 (N=4)	1.1 (N=4)	

(Interviewer: Be sure to show criteria cards to indicate the way in which these categories are defined for the handicapped identified in #2)

Head Start % of Column	Non-Head Start % of Column	
		4. WOULD THIS CHILD BE CONSIDERED AS MULTIPLY HANDICAPPED?
1.4 (N=6)	86.6 (N=306)	2 no
98.6 (N=423)	13.3 (N=47)	1 yes
		(specify handicaps; use codes from #2) ☐☐ ☐☐ ☐☐
		5. IS THIS CHILD PARTICIPATING IN A MAINSTREAMING PROGRAM?
1.4 (N=6)	86.6 (N=306)	2 no
98.6 (N=423)	13.3 (N=47)	1 yes
		5a. IN WHICH OF THE FOLLOWING MAINSTREAMING OPTIONS HAVE YOU PLACED THIS CHILD? *(Check one that applies)*
38.2 (N=164)	4.2 (N=15)	1 complete mainstreaming of handicapped child into a regular classroom *(no supportive assistance)*
52.2 (N=224)	4.8 (N=17)	2 complete mainstreaming of handicapped child into a regular classroom with supportive assistance provided by a specialist
1.4 (N=6)	•	3 complete mainstreaming of handicapped children in a classroom where the regular classroom teacher and a special education teacher cooperatively work with all children *(a team arrangement)*
2.3 (N=10)	2.5 (N=9)	4 reverse mainstreaming in which normal children become part of a special education class
3.3 (N=14)	1.4 (N=5)	5 partial mainstreaming where handicapped children are in a special education class but go to mainstreamed classes for one or more regular classroom activities
1.2 (N=5)	0.3 (N=1)	6 handicapped children receive services from your program but are not mainstreamed
		5b. HOW MANY HOURS WOULD YOU ESTIMATE THIS CHILD SPENDS IN A MAINSTREAMING SITUATION WITH NORMAL CLASSMATES?
Average hours 21.49	3.08	☐☐ *(Hours per week)*

(3

5c. HOW MANY HOURS IS THIS CHILD'S MAINSTREAMING SITUATION POTENTIALLY AVAILABLE?

Average hours

22.61	3.45	☐☐	*(Hours per week)*

Average %

93.87	11.3	☐☐☐	*(Interviewer: Compute percentage of available mainstreaming time the child actually participates in)*

Head Start % of Column	Non-Head Start % of Column	
		6. IS THIS CHILD INVOLVED IN A CLASSROOM THAT USES A LOCALLY DESIGNED CURRICULUM?
33.8 (N=19)	28.2 (N=121)	2 No
66.2 (N=234)	71.8 (N=308)	1 Yes
		└→ 6a. Which of the following types of curriculums were designed.
27.0 (N=116)	40.5 (N=143)	___ Performance based (criterion referenced)
31.2 (N=134)	24.9 (N=88)	___ Experienced based (discovery learning)
		___ Other *(specify)* ____________
		___ Other *(specify)* ____________
		7. IS THIS CHILD INVOLVED IN A CLASSROOM THAT USES A CURRICULUM THAT IS LOCALLY ADAPTED FROM A STANDARDIZED CURRICULUM?
20.7 (N=89)	75.0 (N=265)	2 No
79.3 (N=34)	25.0 (N=88)	1 Yes
		└→ 7a. Which of the following standardized curriculum were adapted? *(Check all that apply)*
17.7 (N=76)	27.2 (N=96)	___ Portage
34.0 (N=146)	15.9 (N=56)	___ Learning Accomplishment Profile - Curriculum
46.9 (N=201)	53.8 (N=190)	___ Peabody
7.5 (N=32)	4.5 (N=16)	___ Cognitive (Ypsilanti)
7.7 (N=33)	17.3 (N=61)	___ Montessori
7.9 (N=34)	23.8 (N=84)	___ Frostig
31.2 (N=134)	34.0 (N=120)	___ Other *(specify)* ____________
		___ Other *(specify)* ____________

8. HOW LONG HAS THIS CHILD BEEN IN YOUR PROGRAM?

63.4 (N=272)	41.9 (N=148)	1 less than one year
18.6 (N=80)	20.7 (N=73)	2 one year
14.3 (N=62)	19.6 (N=69)	3 2 years
3.5 (N=15)	17.8 (N=63)	4 over 2 years

9. HOW WOULD YOU CHARACTERIZE THE INVOLVEMENT OF THIS CHILD'S PARENTS IN YOUR PROGRAM?

28.7 (N=123)	36.1 (N=128)	1 very active
31.0 (N=133)	38.4 (N=135)	2 average involvement
27.7 (N=119)	19.0 (N=67)	3 only minor involvement
12.6 (N=54)	6.5 (N=23)	4 do not participate at all

10. ARE THERE ANY SERVICES YOU WOULD LIKE TO MAKE AVAILABLE EITHER TO THIS CHILD OR HIS/HER FAMILY THAT YOU HAVE NOT HAD THE RESOURCES AND/OR THE TIME TO PROVIDE?

72.0 (N=309)	57.4 (N=201)	2 No
28.0 (N=120)	42.6 (N=152)	1 Yes

→ What Services? *(Interviewer: Coding will be done at later date.. Enter responses verbatim)*

☐ ______________________________

☐ ______________________________

☐ ______________________________

☐ ______________________________

See Text

11. SEX

60.1 (N=258)	60.7 (N=214)	1 Boy -
39.9 (N=171)	39.3 (N=139)	2 Girl -

FREQUENCIES BY PROGRAM TYPE FOR TEACHER BACKGROUND QUESTIONNAIRE

FREQUENCIES BY PROGRAM TYPE FOR THE TEACHER BACKGROUND QUESTIONNAIRE

Below you will find a series of questions about yourself and your experience with special children. Circle the answers to these questions which come closest to describing you and your background.

Head Start	Non-Head Start
9.8 (N=42)	17.3 (N=61)
23.8 (N=102)	26.6 (N=94)
33.1 (N=142)	33.1 (N=117)
33.3 (N=143)	22.9 (N=81)

1. How many years have you worked with preschool handicapped children?

   1 Less than 1 year

   2 1-2 years

   3 3-5 years

   4 over 5 years

Head Start	Non-Head Start
27.0 (N=116)	36.8 (N=130)
61.8 (N=265)	58.6 (N=207)
21.4 (N=92)	19.8 (N=70)
14.5 (N=62)	7.1 (N=25)
4.0 (N=17)	4.5 (N=16)
15.2 (N=65)	31.4 (N=111)
14.0 (N=60)	9.3 (N=33)

2. Prior to this program year what types of contact have you had with handicapped children? (Check all that apply)

   ____ as a volunteer

   ____ as a teacher

   ____ as an aide

   ____ as a parent

   ____ as a sibling

   ____ other (specify) ____________________

   ____ other (specify) ____________________

   ____ none

Head Start	Non-Head Start
3.3 (N=14)	
7.5 (N=32)	3.4 (N=12)
40.3 (N=173)	13.3 (N=47)
10.0 (N=43)	2.8 (N=10)
21.7 (N=93)	31.4 (N=111)
17.2 (N=74)	49.0 (N=173)

3. What is the highest level of education you have completed?

   1 some high school, but no diploma

   2 high school graduate (or GED)

   3 some college, but no degree

   4 associate degree

   5 bachelor's degree

   6 postgraduate study

Head Start	Non-Head Start
5.1 (N=22)	44.2 (N=156)
26.1 (N=112)	18.1 (N=64)
13.5 (N=58)	22.9 (N=81)
49.4 (N=212)	13.3 (N=47)
5.8 (N=25)	1.4 (N=5)

4. If you are a college graduate, what is your present area of specialization?

   1 special education

   2 early childhood development

   3 other degree area

   4 does not apply

   5 no response

Head Start	Non-Head Start
23.1 (N=99)	56.1 (N=198)
31.2 (N=134)	4.5 (N=16)
45.7 (N=196)	39.9 (N=139)

5. Have you received any other formal classroom training that has prepared you to work with preschool children?

   3 no

   2 yes, I'm a Child Development Associate (or soon will be)

   1 yes, I have other special training ________(specify)

Head Start	Non-Head Start	
		6. Are you certified by your State Department of Education to teach handicapped children?
86.2 (N=370)	43.9 (N=155)	2 no
13.8 (N=59)	56.1 (N=198)	1 yes
		7. What do you consider to be your most important training needs at this time? (Check no more than three training areas)
8.2 (N=35)	8.2 (N=29)	____ knowledge of Head Start performance standards
22.1 (N=95)	33.4 (N=118)	____ behavior modification/classroom management
33.8 (N=145)	27.5 (N=97)	____ individualized instructional techniques
22.6 (N=97)	32.3 (N=114)	____ preparation of individualized learning objectives
15.6 (N=67)	13.3 (N=47)	____ working with parents
10.0 (N=43)	11.6 (N=41	____ strategies for recruitment of handicapped children
20.7 (N=89)	32.0 (N=113)	____ screening and assessment
21.0 (N=90)	13.6 (N=48)	____ theory and practice of mainstreaming
52.9 (N=227)	45.9 (N=162)	____ specific training for a handicapping condition (e.g., blind, deaf)
41.3 (N=177)	17.8 (N=63)	____ understanding handicapping conditions
1.9 (N=8)	14.2 (N=50)	____ other (specify) ____________________
		____ other (specify) ____________________
Mean Class Size		
21.1	13.1	
3.7	10.8	8. How many children do you have enrolled in your class?
Average Number of children		
21.14	13.07	☐☐☐ (enter number)
		8a. Of this number, how many have been identified as handicapped?
3.73	10.79	☐☐☐
		8b. Of the handicapped children how many are:
0.15	0.17	☐☐☐ American Indian or Alaskan Native
0.04	0.08	☐☐☐ Asian or Pacific Islander
1.23	2.16	☐☐☐ Black, not of Hispanic origin
0.35	0.82	☐☐☐ Hispanic
1.96	7.53	☐☐☐ White, not of Hispanic origin

Average Staff		
1.74	1.87	9. How many paid adult staff (excluding yourself) are generally in your class during the day?
1.33	0.89	10. How many volunteers are generally in your class during the day?
0.46	0.27	10a. Of this number, how many are parents of handicapped children enrolled?
		11. Which of the following represents your salary? (Circle one)
0.5 (N=2)	1.4 (N=5)	0 no response
40.6 (N=176)	7.1 (N=25)	1 $5,000 or less
30.8 (N=132)	17.8 (N=63)	2 $5,000 to $7,000
16.8 (N=72)	34.3 (N=121)	3 $7,000 to $10,000
6.5 (N=28)	22.4 (N=79)	4 $10,000 to $12,000
4.9 (N=21)	17.0 (N=60)	5 Over $12,000

APPENDIX IV

DUNCAN SOCIO-ECONOMIC INDEX

I. PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS

Housewife 01

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data		
							Percent Population	Percent Women	Percent Increase 1950-60
000	001	Accountants & auditors	75	9	92	1	.74	17	24
010	002	Actors & actresses	60	8	84	1	.02	38	-26
012	003	Airplane pilots & navigators	79	9	96	1	.04	01	91
013	004	Architects	90	9	98	1	.05	03	25
014	005	Artists & art teachers	67	9	88	1	.16	35	30
015	006	Athletes	52	8	60	1	.01	08	-63
020	007	Authors	76	9	93	1	.04	25	77
021	008	Chemists	79	9	94	1	.13	09	11
022	009	Chiropractors	75	9	89	1	.02	10	10
023	010	Clergymen	52	8	67	1	.31	02	20
030-060	012	College presidents, prof's, instructors (n.e.c.)	84	9	96	1	.25	22	42
070	013	Dancers & dancing teachers	45	7	61	1	.03	81	25
071	014	Dentists	96	9	99	1	.13	02	10
072	015	Designers	73	9	91	1	.11	13	133
073	016	Dieticians & nutritionists	39	6	64	1	.04	93	17
074	017	Draftsmen	67	9	87	1	.34	06	61
075	018	Editors & reporters	82	9	95	1	.16	37	41
		Engineers, technical					1.35	01	63
080	020	Aeronautical	87	9	97	1	.08	02	194
081	021	Chemical	90	9	98	1	.06	01	25
082	022	Civil	84	9	96	1	.24	01	25
083	023	Electrical	84	9	97	1	.29	01	72
084	024	Industrial	86	9	95	1	.15	02	140
085	025	Mechanical	82	9	96	1	.25	*	39
090	026	Metallurgical, meta'ts.	82	9	97	1	.03	01	49
091	027	Mining	85	9	97	1	.02	*	-15
092-093	028	Not elsewhere classified (Inc. kind not reported)	87	9	96	1	.14	01	106
101	029	Entertainers (n.e.c.)	31	5	48	2	.01	23	-26
102	030	Farm & home management advisors	83	9	96	1	.02	47	9
103	031	Foresters & conservationists	48	7	78	1	.05	02	24
104	032	Funeral directors & embalmers	59	8	83	1	.06	06	-7
105	033	Lawyers & judges	93	9	98	1	.33	04	17
111	034	Librarians	60	8	64	1	.13	86	51
120	035	Musicians & music teachers	52	8	72	1	.31	56	22
130-145	036	Natural scientists (n.e.c)	80	9	95	1	.10	11	27
150	037	Nurses, professional	46	7	71	1	.92	98	46
151	038	Nurses, student professional	51	8	50	1	.09	99	-25
152	039	Optometrists	[illegible]	9	96	1	.02	04	9
153	040	Osteopaths	9[illegible]	9	99	1	.01	12	-24
154	041	Personnel & labor-relations workers	84	9	96	1	.15	31	87
160	042	Pharmacists	82	9	95	1	.14	08	4
161	043	Photographers	50	8	73	1	.08	12	-4
162	044	Physicians and surgeons	92	9	99	1	.36	07	19
163	011	Public relations men & publicity writers	82*	9	95	1	.05	23	64
164	045	Radio operators	69	9	90	1	.05	10	71
165	046	Recreation & group workers	67	9	84	1	.06	43	127
170	047	Religious workers	56	8	63	1	.09	62	35
171	048	Social & welfare workers,	64	8	85	1	.15	72	27
172-175	049	Social scientists	81	9	96	1	.09	25	59
180	050	Sports instructors & officials	64	8	87	1	.12	32	70
181	051	Surveyors	48	7	71	1	.07	04	74
182-184	052	Teachers (n.e.c.)	72	9	89	1	2.60	72	50
185	053	Technicians, med, & dent.	48	7	73	1	.22	63	80
190-191	054	Technicians, testing	62	8	80	1	.44	10	295
192	055	Technicians, (n.e.c.)	62	8	83	1	.10	24	236
193	056	Therapists & healers (n.e.c)	58	8	81	1	.06	54	49
194	057	Veterinarians	78	9	95	1	.02	02	10
195	058	Professional, technical, & kindred workers (n.e.c.)	65	8	86	1	.49	20	251
		~~TOTAL~~					11.36	38	47

* Less than .01

II A: MANAGERS, OFFICIALS AND PROPRIETORS, EXCEPT FARM (SELF-EMPLOYED AND SALARIED)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Percent Increase 1950-60
250	061	Buyers & dept. heads, store	72	9	92	1	.37	23	64
251	062	Buyers & shippers, farm prod.	33	6	51	2	.03	02	-39
252	063	Conductors, railroad	38	8	73	1	.07	*	-21
253	064	Credit men	74	9	92	1	.07	25	43
254	065	Floormen & floor mgrs., store	50	8	79	1	.07	48	01
260	066	Inspectors, public admin. (incl. not rep.)	63	8		1	.12	03	32
260(906+J)	067	Federal public admin. & postal service	72	9	89	1	.06	04	46
260(926)	068	State public admin.	54	8	81	1	.02	04	41
260(936)	069	Local public admin.	56	8	82	1	.03	05	0*
262	070	Mgrs. & super's, buildings.	32	6	41	2	.08	36	-20
265	071	Officers, pilots, pursers, & engineers, ship (other than navy or coastguard)	54	8	79	1	.06	*	-11
270	072	Officials and administrators	66	0		1	.31	19	23
270(906 & J)	073	Federal pub. admin. & postal service (incl. not reported)	84	9	94	1	.11	12	35
270(926)	074	State pub. admin.	66	9	90	1	.06	13	58
270(936)	075	Local pub. admin.	56	8	79	1	.15	27	15
275	076	Officials - lodge, society, union, etc.	58	8	82	1	.05	10	24
280	077	Postmasters	60	8	82	1	.06	41	-05
285	078	Purchasing agents & buyers (n.e.c.)	77	9	92	1	.16	10	63
		TOTAL					1.40		

III B: MANAGERS, OFFICIALS, & PROPRIETORS (N.E.C.) SALARIED ONLY

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	Percent Population	Percent Women	Percent Increase 1950-60
R-SALARIED = 290		If NA industry - see "All Other Industry" below. For Agriculture, Forestry, Fisheries, & Mining - See "All Other Industries" below.							
R(C)	080	Construction	40	8	84	1	.23	03	66
R(206-459 B,M)	081	Manufacturing	79	9	95	1	1.01	07	56
R(507-526 L)	082	Transportation	71	9	87	1	.18	04	22
R(536-579)	083	Communications, utilities & sanitary services	76	9	93	1	.16	11	31
R(606-629)	084	Wholesale trade	70	9	90	1	.31	07	23
		Retail trade (If NA kind see "Other Retail Trade")	56	8		1	96	16	19
R(637 & F)	086	Food & dairy products stores & milk retg.	50	7	78	1	.16	09	10
R(639 & G)	087	Gen. Mchdse. - 5 & 10 store	68	9	90	1	.14	25	47
R(646 + 647)	088	Apparel & access. stores & shoe stores	69	9	89	1	.08	33	19
R(648 + 649)	089	Furniture, home furn, & equipment stores	68	9	89	1	.05	11	13
R(656)	090	Motor vehicles & access., retail	64	8	88	1	.13	04	52
R(657)	091	Gasoline service stations	31	6	63	2	.07	01	23
R(658)	079	Drugstores	~~59~~	~~8~~					
R(D)	092	Eating and drink places	39	7	70	1	.12	39	05
R(666 + 676)	093	Hardware, farm implements, & building material, retail	64	8	87	1	.08	04	24
R(678-696)	094	Other retail trade (incl. not rep.)	59	8	84	1	.12	18	-01
R(706 & 716)	095	Banking & other finance	85	9	96	1	.32	13	71
R(726 & 736)	096	Insurance & other real estate	84	9	96	1	.22	17	100
R(806 & 807)	097	Business services	80	9	96	1	.10	21	151
R(808)	098	Auto repair & garages	47	7	76	1	.03	04	-11
R(809)	099	Misc. repair services	53	8	81	1	.01	07	67
R(826-839)	100	Personal services	50	8	78	1	.12	35	18
R(999 & 817-156, 846-898, A,N,E)	101	All other ind. (incl. not rep.) Incl. Agric. (for farm mgr. see code 222) Forestry, Fisheries, & Mining	62	8	89	1	.36	31	64
		TOTAL (SALARIED)		9			4.02	13	63

*Less than .01

II C: MANAGERS, OFFICIALS, & PROPRIETORS (N.E.C.) SELF-EMPLOYED ONLY

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Perce Incre 1950-60
R-SELF-EMPLOYED=291		(If NA ind. see "All Other Indus." below) For Agriculture, Forestry, Fisheries, & Mining, see "All Other Ind." below.							
R(C)SE	103	Construction	51	8	79	1	.36	01	1
R(206-459, B,M)SE	104	Manufacturing	61	8	88	1	.27	07	-3
R(507-526,L) SE	105	Transportation	43	7	73	1	.06	06	-24
R(536-579)SE	106	Communications & utilities, & sanitary services	44	7	72	1	.01	08	-2
R(606-629)SE	107	Wholesale trade	59	8	85	1	.21	05	-2
		Retail trade (If NA kind see "Other retail trade"	43	7		1	1.57	18	-29
R(637+·)SE	109	Food & dairy products stores & milk ret'g.	33	6	54	2	.34	19	-4
R(639+C)SE	110	Gen. Mchdse.-5&10 store	47	7	72	1	.07	23	-42
R(646+647)SE	111	Apparel & access. stores	65	8	88	1	.09	34	-34
R(648+649)SE	112	Furn., home furn., & equipment stores	59	8	86	1	.08	09	-2
R(656) SE	113	Motor vehicles & acc.	70	9	89	1	.09	03	-0
R(657)SE	114	Gasoline serv. stations	33	6	63	2	.24	03	03
R(D)SE	115	Eating & drink places	37	6	71	1	.33	31	-28
R(666+676)SE	116	Hardware, farm impl., & building mat., retail	61	8	90	1	.10	05	-2
R(678-696+ 658)SE	117	Other retail trade (inc. not rep.)	49	7	75	1	.23	21	-28
R(706&716)SE	118	Banking & other finance	85	9	97	1	.03	05	07
R(726&736)SE	119	Insurance & other real estate	76	9	95	1	.08	16	1
R(806+807)SE	120	Business services	67	9	91	1	.06	16	1
R(808)SE	121	Auto repair serv. & gar.	36	6	68	1	.06	03	-37
R(809)	122	Misc. repair services	34	6	60	2	.03	05	-33
R(826-839) SE	123	Personal services	41	7	68	1	.20	33	-1
R(999&017 -156,846-898,A,H,E) SE	124	All other ind. (incl. not rep.) Incl. Agric. (for farmer see Code N), Forestry, Fisheries, & Mining	49	7	76	1	.15	22	-0
		TOTAL (SELF-EMPLOYED)		7			3.09	15	-22
		TOTAL (SALARIED)					4.02	13	4
		TOTAL (IIA)					1.40		
		TOTAL MANAGERS, OFFICIALS PROPRIETORS (NON-FARM)					8.51	14	

III: CLERICAL AND KINDRED WORKERS

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Percent Increase 1950-60
301	125	Agents (n.e.c.)	68	9	90	1	.25	17	29
302	126	Attendents & assis., Library	44	7	50	1	.05	77	157
303	127	Att's., Physicians & dentists office	38	6	56	1	.11	97	73
304	128	Baggagemen, transportation	25	5	54	2	.01	03	-30
305	129	Bank tellers	52	8	75	1	.20	69	102
310	130	Bookkeepers	51	8	73	1	1.45	84	27
312	131	Cashiers	44	7	69	1	.76	79	106
313	132	Collectors; bill & acct.	39	7	66	1	.05	22	32
314	133	Dispatchers & starters, vehicle	40	7	73	1	.09	12	86
315	134	Express messenger & railway mail clerks	67	9	85	1	.01	04	-64
320	085	File clerks	44	7	73	1	.22	86	27
321	173	Insur. adjusters, examiners & investigators	62	8	89	1	.09	12	75
323	135	Mail carriers	53	8	80	1	.31	02	20
324	136	Messenger & office boys	28	5	43	2	.10	18	07
325	137	Office machine operators	45	7	69	1	.49	74	118
333	102	Payroll & timekeepers	44	7	73	1	.17	59	68
340	108	Postal clerks	44	7	73	1	.34	19	17
341	153	Receptionists	44	7	73	1	.22	98	129
2	507	Secretaries	61	8	82	1	2.31	97	80
343	138	Shipping & rec. clerks	22	5	58	2	.46	08	-01
345	139	Stenographers	61	8	82	1	.43	96	-36
350	501	Stock clerks & storekeepers	44	7	73	1	.54	15	45
351	140	Telegraph messengers	22	5	33	2	.01	05	-42
352	141	Telegraph operators	47	7	75	1	.03	23	-41
353	142	Telephone operators	45	7	72	1	.58	96	01
354	143	Ticket, station & exp. agt.	60	8	82	1	.11	22	08
360	506	Typists	61	8	82	1	.84	93	48
T	144	Clerical & kind. workers (n.e.c.)	44	7	73	1	4.68	59	28
		TOTAL					14.91	77	35

IV: · SALES WORKERS

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Percent Increase 1950-60
380	145	Ad. agents & salesmen	66	9	90	1	.05	14	03
381	146	Auctioneers	40	7	67	1	.01	03	-24
382	147	Demonstrators	35	6	62	2	.04	93	83
383	148	Hucksters & peddlers	08	1	08	2	.09	57	140
385	149	Ins. agents & brokers & underwriters	66	9	89	1	.57	10	34
390	150	Newsboys	27	5	20	2	.31	04	98
393	151	Real estate agents & brokers	62	8	86	1	.30	24	37
S S=394		Salesmen & sales clerks (n.e.c.) (If ind. NA see "Other Ind."	47	7		1	6.03	41	14
S(206-459 B,H)	154	Manufacturing	65	8	88	1	.74	11	42
S(606-629)	155	Wholesale trade	61	8	83	1	.78	04	22
S(637-696 D,F,G)	156	Retail trade	39	6	61	1	4.22	54	07
S(999 & all not above)	157	Other ind. (incl. not rep.)	50	8	77	1	[illegible]	26	37
395	152	Stock & bond salesmen	73	9	94	1	.04	06	157
		TOTAL					7.44	36	19

V: CRAFTSMEN, FOREMEN, & KINDRED WORKERS

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data		
							Percent Population	Percent Women	Percent Increase 1950-60
401	158	Bakers	22	5	50	4	.17	16	-10
402	159	Blacksmiths	16	3	31	4	.03	01	-53
403	160	Boilermaker	33	6	59	4	.04	*	-31
404	161	Bookbinders	39	6	69	3	.04	57	-13
405	162	Brickmasons, stonemasons & tile-setters	7	5	50	4	.32	*	18
410	163	Cabinetmakers	23	5	48	4	.11	01	-10
Q	164	Carpenters	19	4	35	4	1.43	03	-07
413	165	Cement & concrete finishers	19	4	34	4	.07	*	45
414	166	Compositors & typesetters	52	8	79	3	.28	09	02
415	167	Cranemen, derrickmen & hoistmen	21	4	52	4	.20	01	23
420	168	Decorators & window dressers	40	7	67	3	.08	46	17
421	169	Electricians	44	7	74	3	.55	01	09
423	170	Electrotypers & stereotypers	55	8	81	3	.01	01	-24
424	171	Engravers, exc. photoengravers	47	7	75	3	.02	18	16
425	172	Excavating, grading, & road machinery operators	24	5	57	4	.35	*	103
430		Foremen (n.e.c.) (if ind. NA see "Other Ind.")	49	7		3	1.86	07	-40
430(C)	174	Construction	40	7	65	3	.16	*	69
--		Manufacturing (if mfg. but NA kind see "Other non-dur. goods" below)	53	8			1.17	08	46
430(237-249)	176	Metal industries	54	8	76	3	.20	07	56
430(256-259,M)	177	Machinery, incl. elec.	60	8	82	3	.21	05	66
430(267-276)	178	Transportation equip.	66	9	84	3	.13	01	63
430(286-296,206-236)	179	Other durable goods	41	7	71	3	.16	06	34
430(346-367,B)	180	Textiles, textile products & apparel	39	7	66	3	.12	32	09
430(386-459,306-329)	181	Other non-dur. goods (incl. not spec. mfg.)	53	8	79	3	.36	08	46
430(L)	182	Railroads & railway exp. services	36	6	61	3	.06	*	-33
430(536-579)	184	Telecommunications & utilities & sanitary services	56	8	79	3	.09	02	43
430(999+017-155,606-936,A,D,E,F,G,H,J)	185	Other ind. (incl. not rep)	44	7	73	3	.34	09	36
431	186	Forgemen & hammermen	23	5	51	4	.02	04	-10
432	187	Furriers	39	6	66	3	.01	15	-71
434	188	Glaziers	26	5	57	4	.02	02	49
435	189	Heat treaters, annealers, & temperers	22	5	58	4	.03	02	12
444	190	Inspectors, scalers, & graders, log & lumber	23	5	48	4	.03	04	06
450		Inspectors (n.e.c.) (If NA ind. see "Other Ind." below)	41	7		3	.16	06	05
450(C)	192	Construction	46	7	76	3	.02	01	86
450(L)	193	Railroads & railway exp. serv.	41	7	65	3	.05	*	-19
450(507-579)	194	Transport., exc. rr comm. other pub. utilities	45	7	74	3	.02	02	16
450(999 & all not above, except J K, 906-936)	195	Other non-mfg. ind. (incl. not rep.)	38	6	71	3	.06	15	05
451	196	Jewelers, watchmakers, goldsmiths, & silversmiths	36	6	63	3	06	06	-21
452	197	Job-setters, metal	28	5	64	4	06	01	62
453	198	Linemen & servicemen, telegraph, telephone, & power	49	7	76	3	43	02	28

* Less than .01

V : Craftsmen, Foremen, & Kindred Workers (continued)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data Percent Population	1960 Census Data Percent Women	1960 Census Data Percent Increase 1950-60
450	199	Locomotive engineers	58	8	68	3	.09	*	-21
460	200	~~Locomotive firemen~~	45	7	76	3	.06	*	-30
461	201	Loom fixers	10	1	32	4	.04	01	-21
465	202	Machinists	33	6	68	4	.80	01	-04
		Mechanics & repairmen	25	5		4	3.57	01	28
470	203	Airconditioning, heating & refrigeration	27	5	61	4	.10	*	45
471	204	Airplane	48	7	79	3	.18	02	60
472	205	Automobile	19	4	52	4	1.09	03	03
473	206	Office machine	36	6	66	3	.05	01	-06
474	207	Radio & television	36	6	62	3	.16	02	35
475	208	Railroad & car shop	23	5	52	4	.06	*	-16
480	209	Not elsewhere classified (incl. NA type)	27	5	61	4	1.92	02	49
490	210	Millers, grain, flour, feed, etc.	19	4	39	4	.01	01	-05
491	211	Millwrights	31	6	62	4	.11	*	13
492	212	Molders, metal	12	1	41	4	.08	03	-18
493	213	Motion picture projectionists	43	7	73	3	.03	02	-32
494	214	Opticians & lens grinders & polishers	39	6	72	3	.03	15	06
495	215	Painters, const. & maint.	16	3	37	4	.64	02	-04
501	216	Paperhangers	10	1	22	4	.02	14	-51
502	217	Pattern & model makers, exc. paper	44	7	74	3	.06	02	08
503	218	Photoengravers & lithog's	64	8	84	3	.04	05	-12
504	219	Piano & organ tuners & repairs	38	6	54	3	.01	03	-23
505	220	Plasterers	25	5	46	4	.08	*	-18
510	221	Plumbers & pipefitters	34	6	64	4	.51	*	11
512	222	Pressmen & plate printers, printing	49	7	77	3	.12	04	50
513	223	Rollers & roll hands, metal	22	5	54	4	.05	03	01
514	224	Roofers & slaters	15	3	34	4	.09	*	13
515	225	Shoemakers & repairers, exc. factory	12	1	22	4	.06	04	-38
520	226	Stationary engineers	47	7	72	3	.43	01	26
521	227	Stone-cutters & carvers	25	5	44	4	.01	02	-28
523	228	Structural metal workers	34	6	66	4	.07	22	-51
525	230	Tinsmiths, coppersmiths, & sheet metal workers	33	6	68	4	.23	01	12
530	231	Tool & die makers & setters	50	8	77	3	.29	01	19
535	232	Upholsterers	22	5	53	4	.10	10	-03
545	233	Craftsmen & kind. workers, n.e.c.	32	6	62	4	.17	02	52
555	428	Members of the armed forces: Enlisted men							
555	429	Officers	-						
555	244	N.A. whether enlisted or officer	-						
		TOTAL					14.30	03	13

* Less than .01

VI: OPERATIVES & KINDRED WORKERS

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Dat		
							Percent Population	Percent Women	Percen Incr 1950-
		Apprentices (If trade NA see trade)	35	6		3	.14	03	[illegible]
601	236	Auto mechanics	25	5	46	4	*	01	-31
602	237	Bricklayers & masons	32	6	57	4	.01	*	-31
603	238	Carpenters	31	5	50	4	.01	01	-44
604	239	Electricians	37	6	61	3	.01	01	[illegible]
605	240	Machinists & toolmakers	41	7	59	3	.02	01	-41
610	241	Mechanics, exc. auto	34	6	60	4	.01	02	-41
612	242	Plumbers & pipefitters	33	6	60	4	.01	01	-33
613	243	Building trades (n.e.c.)	29	5	49	4	*	02	-38
614	245	Metalworking trades (n.e.c.)	33	6	55	4	.01	02	-16
615	246	Printing trades	40	7	57	3	.02	02	-25
620	247	Other specified trades	31	5	51	4	.01	08	-33
621	248	Trade not specified	39	6	55	3	.02	06	[illegible]
630	249	Asbestos & insulation workers	32	6	63	4	.03	04	30
631	451	Assemblers	17	4	61	4	1.06	45	73
632	250	Attendants, auto serv. & parking	19	4	44	4	.03	04	30
634	251	Blasters & powdermen	11	1	33	4	.01	01	-37
635	252	Boatmen, canalmen, & lock keepers	24	5	50	4	.01	01	-14
640	253	Brakemen, railroad	42	7	71	3	.10	*	-19
641	254	Bus-drivers	24	5	65	4	.29	10	17
642	256	Chainmen, rodmen, axemen, survey	25	5	47	4	.02	04	43
643	500	Checkers, examiners, & inspectors, manual	17	4	61	4	.80	46	42
645	257	Conductors, bus & street rw	30	5	61	4	.01	02	-42
650	258	Deliverymen & routemen	32	6	59	4	.68	03	71
651	259	Dressmakers & seamstresses, exc. factory	23	5	35	4	.19	97	-16
652	260	Dyers	12	1	36	4	.03	06	-26
653	261	Filers, grinders & polishers, metal	22	5	57	4	.25	06	32
654	262	Fruit, nut & veget. graders, & packers, exc. factory	10	1	19	4	.04	71	-18
670	263	Furnacemen, smeltermen, pourers	18	3	45	4	.09	02	-01
671	299	Graders, sorters, manuf.	17	4	14	4	.06	68	-28
672	264	Heaters, metal	29	5	56	4	.01	02	-17
673	300	Knitters, loopers, toppers, textile	21	4	47	4	.07	68	-41
674	265	Laundry & dry cleaning oper.	15	3	37	4	.64	72	-39
675	266	Meatcutters, exc. slaughter & packing house	29	5	60	4	.29	03	25
680	267	Milliners	46	7	73	3	.01	91	-47
685	268	Mine operators & laborers (n.e.c.) (If NA which below)	10	1		4	.51	*	-41
685(136)	269	Coal mining	02	0	18	4	.22	*	-43
685(146)	270	Crude petrol & nat gas	38	6	70	3	.16	*	-38
685(156+126)	271	Mining & quarrying, exc fuel	12	1	36	4	.14	01	-26
690	272	Motormen, mine, factory, logging camp, etc.	03	0	28	4	.02	01	-40
691	273	Motormen, street, subway, etc.	34	6	64	4	.01	01	-48
692	274	Oilers & greasers, exc auto	13	3	44	4	.09	01	-39
693	235	Packers & wrappers n.e.c.	18	4	38	4	.76	61	43
694	275	Painters, exc. const. & maint.	18	4	47	4	.23	10	21
695	276	Photographic process workers	42	7	65	3	.07	44	60
701	277	Power-station operators	50	8	78	3	.04	05	[illegible]
703	278	Sailors & deck hands	16	3	40	4	.06	01	[illegible]
704	255	Sawyers	05	0	10	4	.15	03	[illegible]
705	279	Sewers & stitchers, manuf.	17	4	39	4	.96	94	[illegible]
710	280	Spinners, textile	05	0	20	4	.08	79	[illegible]
712	281	Stationary firemen	17	3	40	4	.14	01	-23
713	282	Switchmen, railroad	44	7	72	3	.09	*	-34

* Less than .01

VI: Operatives & Kindred Workers (continued)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	Percent Women	Percent Increase 1950-60
714	283	Taxi drivers & chauffers	10	1	37	4	.26	03	-20
T	284	Truck & tractor drivers	15	3	40	4	2.58	01	19
720	285	Weavers, textile	06	0	27	4	.10	42	-36
721	286	Welders & flame cutters	24	5	62	4	.60	05	40
V		Operatives & Kindred Workers N.E.C.					7.74	30	05
V-775		Non-Manufacturing					1.07	17	02
V(C)	363	Construction (For other non-mfg. ind. see after mfg. ind. see after mfg. industries below)	18	4	38	4	.16	01	43
		Manufacturing (If NA what kind of mfg. see under "Manufacturing")	18	3		4	6.67	32	06
		Durable goods	17	3		4	3.17	21	11
W(206)		Lumber & wood products, exc. furniture							
W(207)	290	Sawmills, planing mills, & millwork	07	1	12	4	.16	04	-28
W(208)	291	Misc. wood products	09	1	25	4	.06	21	-01
W(209)	292	Furniture & fixtures	09	1	27	4	.17	15	-04
W(216-236)	293	Stone, clay & glass prod. (If NA which below)	17	3		4	.26	16	05
W(216)	294	Glass & glass products	23	5	50	4	.08	16	-02
W(217)	295	Cement, concrete, & gypsum prod. & plaster	10	1	29	4	.05	01	24
W(218)	296	Structural clay products	10	1	31	4	.03	12	-02
W(219)	297	Pottery & related products	21	4	49	4	.03	40	-34
W(236)	298	Misc. nonmetallic mineral & stone products	15	3	41	4	.06	16	57
		Metal Industries	16	3		4	.84	13	15
W(237)	301	Blast furnaces, steel works & rolling mills	17	3	49	4	.16	02	-17
(238)	302	Other primary iron & steel industries	12	1	39	4	.10	04	-01
(239)	303	Primary nonferrous ind.	15	3	47	4	.13	11	29
(246)	304	Cutlery, hand tools, & other hardware	16	3	48	4	.05	38	14
(247)	305	Fabricated structural met. products	16	3	48	4	.10	07	14
(248)	306	Misc. Fab. metal prods.	15	3	48	4	.29	21	47
(249)	307	Not spec. metal industries	14	2	47	4	*	23	-58
(256 + 57, M)	308	Machinery, exc. elec. (If NA which below)	22	5		4	.43	12	23
(256)	309	Agricultural machinery	21	4	59	4	.04	05	-34
(257)	310	Office & store machines & devices	31	5	67	4	.04	34	-08
(M)	311	Misc. machinery	22	5	57	4	.36	11	40
(259)	312	Elec. mach., & equip. & supp.	26	5	62	4	.48	49	44
(267-276)	313	Trans. equip. (If NA which below)	23	5		4	.45	11	04
(267)	314	Motor veh. & equip.	21	4	61	4	.27	11	-19
(268)	315	Aircraft & parts	34	6	71	4	.12	14	154
(269)	316	Ship & boat bldg. & repairing	16	3	41	4	.03	05	34
(276)	317	Railroad & misc. tranc. equipment	23	5	56	4	.03	08	04
(286-289)	318	Professional & photographic equip. & watches (If NA which below)	29	5		4	.10	39	18
(286)	319	Prof. equip. & supplies	23	5	57	4	.07	39	49
(287)	320	Photo equip. & supplies	40	7	73	3	.02	23	20
(289)	321	Watches, clock, & clock-work operated devices	28	5	62	4	.01	58	-41
(296)	322	Misc. mfd. ind.	16	2	42	4	.22	48	-01

* Less than .01

VI: Operatives & Kindred Workers (n.e.c.) (continued)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data Percent Population	 Percent Women	 Percent Increase 1950-60
							3.48	41	02
		Non-durable goods							
		Food & kindred products (If				4	.73	11	20
		NA which see Not Spec. Food	16	3		4	.21	27	44
		Ind. below)	16	3	43	4	.09	07	-02
W(306)	324	Meat products	22	5	53				
W(307)	325	Dairy products					.16	62	41
W(308)	326	Canning & preserving fruits,	09	1	26	4	.05	07	03
		veg., & sea foods	14	3	36	4	.07	36	36
W(309)	327	Grain mill products	15	3	38				
W(316)	328	Bakery products				4	.04	50	-06
W(317)	329	Confectionary & related	12	1	34	4	.07	13	-07
		products	19	4	48				
W(318)	330	Beverage industries				4	.05	22	07
W(319)	331	Misc. food prep. & kindred	11	4	32	4	.01	49	-06
		products	19	4	46	4	.06	62	-25
W(326)	332	Not spec. food ind.	02	0	13				
W(329)	333	Tobacco mfg.				4	.58	48	-21
W(346-356)	334	Textile mill prod. (If NA	06	0		4	.10	78	1-2
		which below)	21	4	47				
W(346)	335	Knitting mills				4	.04	18	-04
W(347)	336	Dyeing & finishing textiles,	08	1	38	4	.02	43	-39
		exc. knit goods	14	3	44	4	.39	45	-33
W(348)	337	Carpets, rugs, floor cov.	02	0	14	4	.03	38	-23
W(349)	338	Yarn, thread, & fab. mills	10	1	33				
W(356)	339	Misc. tex. mill prod.							
W(36763)	340	Apparel & other fabricated				4	.68	73	04
		textile prod. (If NA which	21	5	39	4	.61	75	03
		below)	22	5	36	4	.06	61	14
W(8)	341	Apparel & access.	17	3		4	.35	23	10
W(367)	342	Misc. fab. tex. prod.	19	4					
W(386-389)	343	Paper & allied products							
		(If NA which below)				4	.17	09	11
W(386)	344	Pulp, paper, & paperbd.	19	4	51				
		mills				4	.11	33	19
W(387)	345	Paperboard containers,	17	3	37	4	.07	41	-03
		boxes	19	4	52				
W(389)	346	Misc. paper & pulp prod.				4	.15	38	35
W(396+398)	347	Printing, publishing, &	31	5	60		.30	15	15
		allied industries				4	.04	34	-13
W(406-409)	348	Chemical & allied prod.	20	4		4			
		(If NA which below)	09	1	51	4	.03	37	36
		Synthetic fibres	26	5	57				
W(406)	349	Drugs & medicines				4	.03	08	07
W(407)	350	Paints, varnishes, & related	15	3	51	4	.21	10	20
W(408)	351	prod.	23	5	55				
		Misc. chem. & allied prod.				3	.09	02	04
W(409)	352	Petroleum & coal prod.	51	8	79	3	.07	01	02
W(416+419)	353	(If NA which below)	56	8	44	4	.01	06	-15
		Petroleum refining	14	2					
W(416)	354	Misc. pet. & coal prod.				4	.25	28	20
W(419)	355	Rubber prod. & misc. plas-	22	5			.31	48	-17
W(4266	356	tic products				4			
429)		Leather & leather prod.		3					
W(436-438)	357	(If NA which below)	16			4	.03	14	-39
		Leather: tanned, curried	10	1	37	4	.23	51	-12
W(436)	358	& finished	09	1	31	4	.05	53	-20
		Footwear exc. rubber	14	2	36				
W(347)	359	Leather prod. exc. footwear				4	.02	41	-44
W(438)	360	Not spec. mfg. ind. (Incl.	16	3	44		.91	19	-04
W(459)	361	MFG. but NA kind)							
		Other non-manufacturing							
		Construction-see before mfg.							
		industries (If NA what kind					.09	01	-40
		see Not. Spec. Ind. below)			42	4	.06	07	17
W(L)	364	Railroads & railway express	15	3	53	4			
		services	23	5			.08	03	-05
W(507-526)	365	Transportation, exc. rail			52	4			
W(536-579)	366	Communications & utilities	21	4			.36	28	-02
		& sanitary services			38	4	.11	12	45
W(606-696,			17	3	45	4			-24
D.F.G)	367	Wholesale & retail trade	19	4	29	4	.02	50	
W(806-809)	368	Business & repair services	11	1					-10
W(826-839	369	Personal services			30	4	.07	10	
K)			17	3					
W(906-936	370	Public administration				4	.14	30	.12
J)			13	3					
W(999-non-	362	Not spec. non-mfg. ind.				4			
manuf.)		(Incl. non-mfg. but NA kind)	20	4					
W(999 & 017-018, 706-736, 846-898, A.E.H)	371	All other industries							
							19.91	28	09
		TOTAL							

* Less than .01

VII: SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Percent Increase 1950-60
810	380	Attendants, institutions, hosp.	13	1	38	4	.63	73	92
812	381	Attendants, prof. & per. serv. n.e.c.	26	5	46	4	.12	70	73
813	382	Att's. rec. & amusement	19	4	26	4	.10	13	-02
814	383	Barbers	17	3	37	4	.28	03	01
815	384	Bartenders	19	4	46	4	.29	11	-12
820	386	Bootblacks	08	1	02	4	.02	04	-31
821	385	Boarding & lodg. housekeepers	30	5	35	4	.05	88	02
823	237	Chambermaids & maids, exc. private household	11	1	18	4	.28	98	40
824	387	Charwomen & cleaners	10	1	15	4	.30	67	54
825	388	Cooks, exc. priv. h.h.	15	3	31	4	.93	64	28
830	389	Counter & fountain workers	17	3	41	4	.26	71	79
831	390	Elevator operators	10	1	28	4	.12	32	-19
832	939	Housekeepers & stewards, exc. private households	31	6	61	4	.24	80	38
834	394	Janitors & sextons	09	1	18	4	.96	13	31
835	502	Kitchen workers n.e.c. exc. private households	11	1	18	4	.52	58	54
840	396	Midwives	37	6	51	3	*	78	-45
841	400	Porters	04	0	16	4	.24	02	-11
842	401	Practical nurses	22	5	32	4	.34	96	50
843	288	Hairdressers, cosmetologists	17	3	37	4	.47	89	45
850	391	Firemen, fire protection	37	6	73	3	.22	—	25
851	392	Guards, watchmen, doorkeepers	18	4	38	4	.40	03	03
852	395	Marshalls & constables	21	5	44	4	.01	04	-09
853	397	Policemen & detectives (If NA which below)	39	7		3	.40	03	31
853(All others)	399	Private	36	6	67	3	.03	08	-17
853(906-936,J)	398	Government	40	7	74	3	.37	02	36
854	402	Sheriffs & bailiffs	34	6	66	4	.04	05	30
860	405	Watchmen (crossing) & bridge tenders	17	3	39	4	.04	45	195
874	403	Ushers, recreation & amusement	25	5	34	4	.02	31	-37
875	404	Waiters & waitresses	16	3	39	4	1.39	87	25
890	406	Service workers except private household (n.e.c.)	11	1	18	4	.30	43	-02
		TOTAL					8.94	53	28

* Less than .01

VIII: PRIVATE HOUSEHOLD WORKERS

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	1960 Census Data: Percent Women	1960 Census Data: Percent Increase 1950-60
801	175	Baby sitters, priv. households	07	1	07	4	.54	97	367
802	372	Housekeepers, priv. h.h. (If NA which below)	19	4		4	.23	99	04
802(L,O)	374	Living out	21	4	32	4	.15	98	03
802(LI)	373	Living in	10	1	25	4	.09	99	05
803	375	Laundress, priv. h.h. (If NA which below)	12	1		4	.06	98	-44
803(LO)	376	Living out	12	1	09	4	.06	98	-44
803(LI)	505	Living in	—	—	09	4	*	100	-65
P	377	Priv. h.h. workers n.e.c. (If NA which below)	07	1		4	1.99	96	07
P(LO)	379	Living out	06	0	07	4	1.83	96	14
P(LI)	378	Living in	12	1	26	4	.16	94	-36
		TOTAL					2.83	96	22

* Less than .01

IX: FARMERS AND FARM MANAGERS (NOT LABORERS & FOREMEN)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data Percent Population	 Percent Women	 Percent Increase 1950-60
N(self owner)	019	Farmers (farm owners)	14	2		8	3.88	05	-42
N(ten, share)	059	Farmers (tenants & share-croppers)	14			8			
N(NA type)	191	Farmers (NA which type)	14	2		8			
222	060	Farm managers	36	6		8	04	03	-30
		TOTAL					3.92	05	-42

X: FARM LABORERS AND FOREMEN

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data Percent Population	 Percent Women	 Perce Incre 1950-60
901	407	Farm Foremen	20	4		8	.04	02	38
N	408	Farm laborers, wage workers	06	0		8	1.93	12	-2
V	409	Farm lab., unpaid family workers	17	3		8	.44	44	-6
905	410	Farm service lab., self-emp.	22	5		8	.01	02	-43
		TOTAL					2.42	17	-1

XI: LABORERS, EXCEPT FARM AND MINE

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data		
							Percent Population	Percent Women	Percent Increase 1950-60
960	323	Carpenters helpers, exc. logging & mining	07	0	16	4	-07	01	-30
962	411	Fishermen & oystermen	10	1	11	4	-06	01	-47
963	412	Garage laborers, car washers & greasers	08	1	24	4	.14	03	32
964	413	Gardeners, exc. farm and groundskeepers	11	1	19	4	-33	02	38
965	414	Longshoremen & stevedores	11	1	25	4	-09	01	-16
970	415	Lumbermen, raftsmen, woodchoppers	04	0	04	4	.21	01	-28
971	416	Teamsters	08	1	13	4	-03		-03
972	417	Truck drivers' helper	09	1	28	4	-05	01	-32
973	503	Warehousemen n.e.c.	08	1	28	4	-19	01	60
		Laborers, n.e.c. Non-manufacturing	07	1		4	2.79	03	-03
X(C)	491	Construction (for other non-mfg. ind. see after mfg. Industries below)	07	1	16	4	1.16	01	08
X(985)		Manufacturing (If NA what kind see not spec. ind. under manufacturing below)	08	1		4	1.49	07	-17
		Durable goods					.96	04	-15
		Lumber & wood prod. exc. furn.							
X(206)		Logging							
X(207)	419	Sawmills, planing mills, & millwork	03	0	04	4	.15	02	-34
X(208)	420	Misc. wood products	02	0	09	4	.02	09	-27
X(209)	421	Furniture & Fixtures	05	0	19	4	.03	08	-08
X(216-236)	422	Stone, clay & glass prod. (If NA which below)	07	1		4	.13	03	01
X(216)	423	Glass & glass products	14	2	31	4	.02	07	-02
X(217)	424	Cement, concrete, gypsum, plaster products	05	0	22	4	.04	01	18
X(218)	425	Structural clay products	05	0	19	4	.04	03	-08
X(219)	426	Pottery & related prod.	07	1	30	4	.01	16	-31
X(236)	427	Misc. nonmetallic mineral & stone products	05	0	23	4	.02	02	14
		Metal Industries	07	1		4	.39	03	-11
X(237)	430	Blast furnaces, steel works, rolling mills	09	1	35	4	.19	01	-15
X(238)	431	Other primary iron & steel ind.	04	0	18	4	.07	01	-19
X(239)	432	Primary nonferrous ind.	06	0	34	4	.04	02	-04
X(246)	433	Cutlery, hand tools & other hardware	07	1	27	4	.01	18	-48
X(247)	434	Fabricated structural metal products	07	1	27	4	.03	03	15
X(248)	435	Misc. fab. met. prod.	10	1	27	4	.06	11	16
X(249)	436	Not spec. metal ind.	09	1	28	4	*	11	-57
X(256+257, M)	437	Machinery, exc. elec. (If NA which below)	11	1		4	.07	04	-16
X(256)	438	Agric. mach., tractors	14	2	38	4	.01	03	-47
X(257)	439	Office & store machines & devices	17	3	45	4	*	08	05
X(M)	440	Miscellaneous machinery	10	1	32	4	.06	03	-07
X(259)	441	Electrical machinery, equipment and supplies	14	2	45	4	.05	18	-02
X(267-276)	442	Transportation equipment (If NA which below)	11	1		4	.10	03	-17
X(267)	443	Motor vehicles & motor vehicle equipment	13	1	42	4	.06	03	-27
X(268)	444	Aircraft and parts	15	3	51	4	.01	06	65
X(269)	445	Ship & boat bldg. rpr.	02	0	19	4	.02	02	-09
X(276)	446	Railroad & misc. transportation equipment	08	1	31	4	.01	04	-03

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* Less than .01

XIi_ Laborers (continued)

Census Book Code	ISR Code	Occupation	Duncan Socio-Economic Index	Duncan Population Decile	Census Socio-Economic Index	Rice Modified White-Blue Collar	1960 Census Data: Percent Population	Percent Women	Percent Increase 1950-60
X(286-289)	447	Professional & photographic equipment & watches (If NA which below)	11	1		&	.01	19	-07
X(286)	448	Profess. equip. & supp.	10	1	37	&	*	18	17
X(287)	449	Photo. equip. & supp.	16	1	41	&	*	18	17
X(289)	504	Watches, clock, & clock-work operated devices	11	1	29	&	*	32	-62
X(296)	450	Misc. Mfg. industries	12	1	28	&	.02	18	-22
		Nondurable goods					.53	10	-18
		Food & kind. prod. (If NA which see Not. Spec. Food Ind. below)	09	1		&	.21	08	-16
X(306)	452	Meat products	08	1	32	&	.05	10	-12
X(307)	453	Dairy products	13	1	34	&	.03	03	-23
X(308)	454	Canning & preserv. fruits vegetables & sea foods	06	0	15	&	.04	17	02
X(309)	455	Grain-mill products	06	0	23	&	.03	02	-07
X(316)	456	Bakery products	10	1	-30	&	.01	12	78
X(317)	457	Confect., & related prod.	10	1	33	&	.01	17	-17
X(318)	458	Beverage industries	16	3	34	&	.03	03	-19
X(319)	459	Misc. food prep. & kind. prod.	05	0	17	&	.03	05	-41
X(326)	460	Not spec. food ind.	14	2	40	&	*	20	-20
X(329)	461	Tobacco Manufacturers	00	0	10	&	.01	31	02
X(346-356)	462	Textile mill products (If NA which below)	03	0		&	.06	16	-33
X(346)	463	Knitting mills	04	0		&	*		
X(347)	464	Dyeing & finishing textiles except knit goods	09	1		&	*		
X(348)	465	Carpets, rugs, floor covering	14	2		&	*		
X(349)	466	Yarn, thread, & fabric mills	01	0	12	&	.05	16	-34
X(356)	467	Misc. textile-mill products	06	0	14	&	*		
X(36763)	468	Apparel & other Fab. textile products	09	1	21	&	.02	40	-02
X(3)	469	Apparel & accessories	11	1		&			
X(367)	470	Misc. fab. textile products	06	0		&			
X(386-389)	471	Papers & allied prod. (If NA which below)	07	1		&	.06	06	-15
X(386)	472	Pulp, paper, & paperbd. mills	05	0	27	&	.04	02	-13
X(387)	473	Paperbd. containers & boxes	10	1	21	&	.01	12	-61
X(389)	474	Misc. paper & pulp products	08	1	30	&	.01	17	-39
X(3966398)	475	Printing, publishing, allied industry	23	3	30	&	.02	13	09
X(403-409)	476	Chemicals & allied products (If NA which below)	08	1		&	.07	02	-13
X(406)	477	Synthetic fibers	04	0	30	&	*	06	-22
X(407)	478	Drugs & Medicines	22	3	48	&	*	08	03
X(408)	479	Paints, varnishes and related products	08	1	42	&	*	05	-34
X(409)	480	Misc. chemicals & allied products	08	1	18	&	.06	03	-10
X(416 & 419)	481	Petroleum & Coal products (If NA which below)	22	3		&	.03	01	-36
X(416)	482	Petroleum refining	26	3	59	&	.02	01	-40
X(419)	483	Misc. petroleum and coal products	03	0	26	&	*	07	-03
X(4266429)	484	Rubber products	12	1	41	&	.03	13	-14
X(436-439)	485	Leather & leather products (If NA which below)	06	0	27	&	.02	22	-28
X(436)	486	Leather; tanned, curried & finished	02	0		&	*		
X(437)	487	Footwear, except rubber	10	1		&	*		
X(438)	488	Leather products, except footwear	12	1		&	*		
X(439)	489	Not Specified manufacturing industries (Incl. Manuf. but NA kind)	08	1	26	&	*	11	-77
X(L)	492	Railroads & railway express service	03	0	20	&	.21	02	-52
X(507-526)	493	Transportation, except railroads	09	1	28	&	.14	01	04
X(536-579)	494	Telecommunications and utilities & sanitary service	06	0	18	&	.19	01	-06
X(606-696)	495	Wholesale & retail trade	12	1	28	&	.38	05	38
X(806-809)	496	Business & repair services	26	1	09	&	.04	04	54
X(X,826-839)	497	Personal services	09	0	01	&	.12	07	-03
X(906-936 J)	498	Public administration	29	1	07	&	.12	03	-22
X(999-non manuf.)	490	Non-manufacturing (incl. non-manuf. NA kind)	07	1		&	.23	09	-16
X(939+017-018,706-499,716 A)	499	All other industries (incl. not reported.)	07	0	06	&			
		Total					3.47	04	-07

* Less than .01

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